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RESULT 7
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DEFINITION
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ACCESSION
           AY510107
           AY510107.1 GI:41388185
VERSION
KEYWORDS
SOURCE
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REFERENCE
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           Asai, S., Okada, N., Okada, H., Dohi, N. and Hosokawa, M.
  AUTHORS
  TITLE
           Human IgM monoclonal Ab which induces complement mediated cytolysis
           of HIV-1 infected cells
           Unpublished
  JOURNAL
REFERENCE
           2 (bases 1 to 824)
           Asai, S., Okada, N., Okada, H., Dohi, N. and Hosokawa, M.
  AUTHORS
  TITLE
           Direct Submission
  JOURNAL
           Submitted (22-DEC-2003) Biodefense, Nagoya City University Graduate
           School of Medical Sciences, 1 Kawasumi Mizuho-cho Mizuho-ku,
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ACCESSION
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VERSION
           BC073764.1 GI:49256424
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REFERENCE
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 AUTHORS
           Strausberg, R.L., Feingold, E.A., Grouse, L.H., Derge, J.G.,
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           Butterfield, Y.S., Krzywinski, M.I., Skalska, U., Smailus, D.E.,
           Schnerch, A., Schein, J.E., Jones, S.J. and Marra, M.A.
           Generation and initial analysis of more than 15,000 full-length
 TITLE
           human and mouse cDNA sequences
 JOURNAL
           Proc. Natl. Acad. Sci. U.S.A. 99 (26), 16899-16903 (2002)
  PUBMED
           12477932
REFERENCE
              (bases 1 to 936)
 AUTHORS
           Strausberg, R.
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JOURNAL
           Submitted (23-JUN-2004) National Institutes of Health, Mammalian
           Gene Collection (MGC), Cancer Genomics Office, National Cancer
           Institute, 31 Center Drive, Room 11A03, Bethesda, MD 20892-2590,
           NIH-MGC Project URL: http://mgc.nci.nih.gov
 REMARK
           Contact: MGC help desk
COMMENT
           Email: cgapbs-r@mail.nih.gov
           Tissue Procurement: Louis Staudt
           cDNA Library Preparation: Rubin Laboratory
           cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
           DNA Sequencing by: Sequencing Group at the Stanford Human Genome
           Center, Stanford University School of Medicine, Stanford, CA 94305
           Web site:
                          http://www-shgc.stanford.edu
           Contact: (Dickson, Mark) mcd@paxil.stanford.edu
           Dickson, M., Schmutz, J., Grimwood, J., Rodriquez, A., and Myers,
           R. M.
           Clone distribution: MGC clone distribution information can be found
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TITLE

Direct Submission

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ACCESSION
VERSION
          AX305000.1 GI:17644678
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REFERENCE
          Takashi, T., Katsunari, T.P. and Nobuaki, H.
 AUTHORS
 TITLE
          Human monoclonal antibody against a costimulatory signal
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REFERENCE
          Tsuji, T., Tezuka, K. and Hori, N.
 AUTHORS
 TITLE
          Human monoclonal antibody against a costimulatory signal
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          Patent: WO 0187981-A 29 22-NOV-2001;
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ACCESSION
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VERSION
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          JP 2002034581-A/28.
SOURCE
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REFERENCE
          Tsuji, T., Tezuka, K. and Hori, N.
 AUTHORS
 TITLE
          Human monoclonal antibody against constimulation transducer
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 JOURNAL
          Patent: JP 2002034581-A 28 05-FEB-2002;
          JAPAN TOBACCO INC
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COMMENT
               JP 2002034581-A/28
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               TAKASHI TSUJI, KATSUNARI TEZUKA, NOBUAKI HORI
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REFERENCE
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 AUTHORS
           Hirabayashi, Y., Munakata, Y., Takai, O., Shibata, S., Sasaki, T. and
           Sano, H.
 TITLE
           Human B-cell clones expressing lupus nephritis-associated anti-DNA
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           Scand. J. Immunol. 37 (5), 533-540 (1993)
 JOURNAL
 MEDLINE
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ORIGIN

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VERSION
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          Unclassified.
REFERENCE
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         Lonberg, N. and Kay, R.M.
 AUTHORS
          High affinity human antibodies and human antibodies against digoxin
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ACCESSION
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VERSION
KEYWORDS
SOURCE
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 ORGANISM
         Unknown.
         Unclassified.
REFERENCE
           (bases 1 to 388)
 AUTHORS
         Lonberg, N. and Kay, R.M.
 TITLE
         Transgenic non-human animals for producing heterologous antibodies
         Patent: US 6300129-A 206 09-OCT-2001;
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DEFINITION
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ACCESSION
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VERSION
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REFERENCE
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 AUTHORS
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 TITLE
          Transgenic non-human animals capable of producing heterologous
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 JOURNAL
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                              08/758417
              NILS LONBERG, ROBERT M KAY
          PI.
              -C12N5/00, C12N5/28, C12N5/24, C12N5/10, C07K16/00, A61K39/00 CC
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Gapop 10.0 , Gapext 1.0

Searched:

4134886 seqs, 2624710521 residues

Total number of hits satisfying chosen parameters:

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Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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420	100.0	3819	2.	AAT78825		Aat78825 Kappa lig
420	100.0	3819	2	AAV39266		Aav39266 Plasmid p
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368.6	87.8	388	2	AAT73441		Aat73441 Human imm
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356.2	84.8	439	2	AAZ21995		Aaz21995 Partial n
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36	325.8	77.6	944	4	AAF44892	Aaf44892 Human bre
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38	324.2	77.2	698	8	ABT31880	Abt31880 Anti-CD40
39	323.2	77.0	384	2	AAT46133	Aat46133 Monoclona
40	323.2	77.0	384	2	AAT85844	Aat85844 Monoclona
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42	323.2	77.0	384	12	ADQ20176	Adq20176 Human sof
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ALIGNMENTS

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XX
AC
     AAT73445;
XX
DT
     03-DEC-1997 (first entry)
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DE
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XX
KW
     Ig; affinity constant; human; antigen; hybridoma; B cell; transgene;
ΚW
     transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW
     transplant rejection; ss.
XX
os
     Homo sapiens.
XX
PN
     WO9713852-A1.
XX
PD
     17-APR-1997.
XX
PF
    10-OCT-1996;
                    96WO-US016433.
XX
PR
     10-OCT-1995;
                    95US-00544404.
XX
PΑ
     (GENP-) GENPHARM INT INC.
XX
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PI
    Lonberg N,
             Kay RM;
XX
DR
    WPI; 1997-235888/21.
XX
PT
    Novel anti-CD4 antibody produced by transgenic mice - used in the
PT
    treatment of auto-immune disease etc.
XX
PS
    Claim 45; Page 272-273; 396pp; English.
XX
CC
    A novel composition has been developed which comprises an immunoglobulin
    (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC
CC
    -1 for binding to a predetermined human antigen. The present sequence
CC
    represents a human light chain variable region partial nucleotide
    sequence, LC6G5, which encodes an amino acid sequence from a claimed
CC
CC
    immunoqlobulin that specifically binds human CD4. The anti-CD4 antibodies
CC
    may be used in therapeutic and diagnostic applications, especially for
CC
    the treatment of human diseases. These antibodies reduce activity of CD4
CC
    cells and reduce undesirable autoimmune reactions, inflammatory response
CC
    and transplant rejection. Transgenic animals are capable of producing
CC
    heterologous antibodies of multiple isotypes by undergoing isotype
CC
    switching. These animals produce a first Ig type that is necessary for
CC
    antigen-stimulated B-cell maturation and can switch to encode and produce
CC
    one or more subsequent heterologous isotypes
XX
SQ
    Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;
                      100.0%; Score 420; DB 2; Length 420;
 Query Match
                      100.0%;
 Best Local Similarity
                             Pred. No. 6.4e-122;
 Matches 420; Conservative
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Oν
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Db
Qу
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Db
Qу
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            121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
Db
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Qу
            181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Db
        241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Qу
            241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
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Db

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XX
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     AAV39293;
XX
     18-DEC-1998
                  (first entry)
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XX
     Synthetic kappa light chain sequence LC6G5.
DE
XX
     Transgenic animal; human heterologous antibody; transgene;
KW
     isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW
     autoimmune reaction; inflammatory response; transplant rejection;
KW
KW
     acid induced lung injury; acute adult respiratory distress syndrome;
KW
     ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW
     cystic fibrosis; ss.
XX
os
     Synthetic.
     Homo sapiens.
os
XX
PN
     WO9824884-A1.
XX
PD
     11-JUN-1998.
XX
PF
     01-DEC-1997;
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XX
PR
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     02-DEC-1996;
XX
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PΑ
XX
PΙ
     Lonberg N, Kay RM;
XX
     WPI; 1998-333306/29.
DR
XX
PT
     Hybridoma producing antibody specific for interleukin-8 - used to prevent
PT
     efflux of neutrophils from vasculature, and treat reperfusion injury.
XX
PS
     Example 42; Page 324-325; 452pp; English.
XX
     The present sequence represents a synthetic kappa light sequence (created
CC
CC
     using oligonucleotides AAV39267-78). This synthetic sequence differs from
     natural sequences in that strings of repeated oligonucleotides are
CC
     interrupted (to facilitate oligonucleotide synthesis and PCR
CC
CC
     amplification), optimal translation initiation sites are incorporated and
     HindII sites were engineered upstream of the translation initiation
CC
     sites. The sequence is used to make plasmid pHC6G5, which is used in the
CC
     construction of miniques for expression of IqGkappa anti-CD4 antibodies,
CC
     in the transgenic mouse of the invention. The specification describes
CC
     transgenic non-human animals, especially a mouse, which are capable of
CC
     producing a human heterologous antibodies of multiple isotypes by
CC
     undergoing isotype switching. The transgenic animals have human heavy and
CC
     light chain transgenes. The transgenes are capable of functionally
CC
CC
     rearranging a heterologous diversity (D) gene in a variable-diversity-
CC
     junction (V-D-J) recombination. The transgenes include a heavy chain
     transgene comprising at least one V, D and J gene segment, and one
CC
```

```
constant region gene segment. The immunoglobulin (Ig) light chain
CC
    transgene comprises at least one V and J gene segment and one constant
CC
    region gene segment. The gene segments are heterologous to the transgenic
CC
    animal. The antibody can be used to prevent efflux of neutrophils from
CC
    vasculature. It can also be used to treat reperfusion injury. CD4 binding
CC
    antibodies are used to reduce undesirable autoimmune reactions,
CC
    inflammatory responses and rejection of transplanted organs. The anti-IL-
CC
    8 antibodies can reduce tissue damage and prolong survival in animal
CC
    models of acute adult respiratory distress syndrome (ARDS) and acid
CC
    induced lung injury. The anti-IL-8 antibodies can also be used for the
CC
    treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
CC
CC
    and cystic fibrosis
XX
SQ
    Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;
                      100.0%; Score 420; DB 2; Length 420;
 Query Match
                      100.0%; Pred. No. 6.4e-122;
 Best Local Similarity
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Qy
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Db
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Qу
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Db
        121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
Qу
            121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
Db
        181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Qy
            181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Db
        241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Qу
            241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Db
        301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
Qу
            301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
Db
        361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
            361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Db
RESULT 3
    AAZ22047 standard; DNA; 420 BP.
XX
AC
    AAZ22047;
XX
DT
    24-NOV-1999 (first entry)
XX
DE
    Nucleotide sequence of LC6G5.
```

```
XX
    Transgenic animal; heterologous antibody; hybridoma; B cell;
ΚW
    transgenic mouse; human heavy chain transgene; digoxin;
KW
    human light chain transgene; immortalized cell; immunoglobulin;
KW
    Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW
    transplant rejection; blood disorder; coaquiation disorder; ss.
KW
XX
    Synthetic.
OS
XX
ΡN
    WO9945962-A1.
XX
PD
    16-SEP-1999.
XX
PF
    12-MAR-1999;
                   99WO-US005535.
XX
PR
    13-MAR-1998;
                   98US-00042353.
XX
PΑ
    (GENP-) GENPHARM INT INC.
XX
    Lonberg N, Fishwild DM,
                             Ball WJ;
PΙ
XX
    WPI; 1999-551219/46.
DR
XX
PT
    Novel transgenic non-human animals used to produce heterologous
PT
    antibodies.
XX
    Example 42; Page 325-326; 484pp; English.
PS
XX
    The specification describes transgenic animals that are capable of
CC
    producing a heterologous antibody. The antibodies are isolated form a
ĊC
    hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC
    having a genome comprising a human heavy chain transgene and a human
CC
    light chain transgene. The B cells are fused to immortalized cells
CC
    suitable for generating a hybridoma, which produces a detectable amount
CC
    of an immunoglobulin that specifically binds digoxin or Shinga-like
CC
    toxin. B cells from transgenic animals can be used to generate hybridomas
CC
    expressing monoclonal high affinity human sequence antibodies. Antibodies
CC
    produced from the transgenic animals of the invention can be used to
CC
    treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC
    disease, transplant rejection, blood disorders such as coagulation
CC
    disorders and other diseases. The present sequence is used in the course
CC
CC
    of the invention
XX
    Sequence 420 BP; 98 A; 116 C; 98 G; 108 T; 0 U; 0 Other;
SQ
  Query Match
                         100.0%; Score 420; DB 2; Length 420;
                         100.0%; Pred. No. 6.4e-122;
  Best Local Similarity
                                                              0; Gaps
                                                                          0;
  Matches 420; Conservative
                               0; Mismatches
                                                 0; Indels
           1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTCGTTCCCA 60
Qу
              1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTCCTGGTTCCCA 60
Db
          61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
Qу
              61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
Db
```

```
121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
Qу
            121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
Db
        181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Qу
            181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Db
        241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Qу
            241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Db
        301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
Qу
            301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
Db
        361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
            361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Db
RESULT 4
AAT78825
    AAT78825 standard; DNA; 3819 BP.
ID
XX
AC
    AAT78325;
XX
DT
    23-JAN-1998 (first entry)
XX
    Kappa light chain plasmid pLC6G5.
DE
XX
    Iq; affinity constant; human; antiqen; hybridoma; B cell; transgene;
KW
    transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW
    transplant rejection; immunoglobulin; ss.
KW
XX
os
    Synthetic.
    Homo sapiens.
os
XX
ΡN
    WO9713852-A1.
XX
PD
    17-APR-1997.
XX
PF
    10-OCT-1996;
                 96WO-US016433.
XX
PR
    10-OCT-1995;
                 95US-00544404.
XX
    (GENP-) GENPHARM INT INC.
PΑ
XX
PΙ
    Lonberg N,
              Kay RM;
ΧX
    WPI; 1997-235888/21.
DR
XX
    Novel anti-CD4 antibody produced by transgenic mice - used in the
PT
PT
    treatment of auto-immune disease etc.
XX
PS
    Example 42; Page 266-268; 396pp; English.
XX
```

```
CC
    A novel composition has been developed which comprises an immunoglobulin
    (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC
CC
    -1 for binding to a predetermined human antigen. The present sequence
    represents the kappa light chain plasmid pLC6G5 which includes the kappa
CC
CC
    constant region and polyadenylation site. Anti- CD4 antibodies may be
    used in therapeutic and diagnostic applications, especially for the
CC
    treatment of human diseases. These antibodies reduce activity of CD4
CC
    cells and reduce undesirable autoimmune reactions, inflammatory response
CC
    and transplant rejection. Transgenic animals are capable of producing
CC
    heterologous antibodies of multiple isotypes by undergoing isotype
CC
    switching. These animals produce a first Iq type that is necessary for
CC
CC
    antigen-stimulated B-cell maturation and can switch to encode and produce
    one or more subsequent heterologous isotypes
CC
XX
    Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;
SO
 Query Match
                      100.0%; Score 420; DB 2; Length 3819;
 Best Local Similarity 100.0%; Pred. No. 1.5e-121;
 Matches 420; Conservative
                            0; Mismatches
                                                Indels
                                                                   0:
          1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTGGTCTCCTGCTGCTCTGGTTCCCA 60
Qу
            2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCTGGTTCCCA 2493
Db
         61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
Qу
            2494 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553
Db
        121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
Qу
            2554 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613
Db
        181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTTGCAAAGT 240
Qу
            2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673
Db
        241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Qy
            Db
       2674 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733
        301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
Qy
```

361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420

RESULT 5 AAV39266 ID AAV39266 standard; DNA; 3819 BP. XX AC AAV39266; XX DT 18-DEC-1998 (first entry)

Db

Qу

Db

XX

Plasmid pLC6G5 nucleotide sequence. DE XX KW Transgenic animal; human heterologous antibody; transgene; isotype switching; neutrophil efflux; reperfusion injury; CD4 binding; ΚW autoimmune reaction; inflammatory response; transplant rejection; KW acid induced lung injury; acute adult respiratory distress syndrome; KW ARDS; vasculitis; septic shock; allergic reaction; asthma; KW cystic fibrosis; ss. KW XX Synthetic. OS Homo sapiens. os XX WO9824884-A1. PNXX 11-JUN-1998. PD XX PF01-DEC-1997: 97WO-US021803. XX PR 02-DEC-1996; 96US-00758417. XX PΑ (GENP-) GENPHARM INT. XX PILonberg N, Kay RM; XX WPI; 1998-333306/29. DR XXPTHybridoma producing antibody specific for interleukin-9 - used to prevent PTefflux of neutrophils from vasculature, and treat reperfusion injury. XX PS Example 42; Page 317-319; 452pp; English. XX The present sequence represents a plasmid, pLC6G5, which contains a CC CC synthetic kappa light chain sequence (created using oligonucleotide CC AAV39244-65). This synthetic sequence differs from natural sequences in CC that strings of repeated oligonucleotides are interrupted (to facilitate CC oligonucleotide synthesis and PCR amplification), optimal translation initiation sites are incorporated and HindII sites were engineered CC CC upstream of the translation initiation sites. The plasmid is used in the CCCC in the transgenic mouse of the invention. The specification describes CC transgenic non-human animals, especially a mouse, which are capable of CCproducing a human heterologous antibodies of multiple isotypes by CCCC

upstream of the translation initiation sites. The plasmid is used in the construction of minigenes for expression of IgGkappa anti-CD4 antibodies, in the transgenic mouse of the invention. The specification describes transgenic non-human animals, especially a mouse, which are capable of producing a human heterologous antibodies of multiple isotypes by undergoing isotype switching. The transgenic animals have human heavy and light chain transgenes. The transgenes are capable of functionally rearranging a heterologous diversity (D) gene in a variable-diversity-junction (V-D-J) recombination. The transgenes include a heavy chain transgene comprising at least one V, D and J gene segment, and one constant region gene segment. The immunoglobulin (Ig) light chain transgene comprises at least one V and J gene segment and one constant region gene segment. The gene segments are heterologous to the transgenic animal. The antibody can be used to prevent efflux of neutrophils from vasculature. It can also be used to treat reperfusion injury. CD4 binding antibodies are used to reduce undesirable autoimmune reactions, inflammatory responses and rejection of transplanted organs. The anti-IL-8 antibodies can reduce tissue damage and prolong survival in animal models of acute adult respiratory distress syndrome (ARDS) and acid

induced lung injury. The anti-IL-8 antibodies can also be used for the

CC CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

CC

```
CC
    treatment of vasculitis, septic shock, allergic reactions (e.g. asthma)
    and cystic fibrosis
CC
XX
    Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;
SO
 Query Match
                     100.0%; Score 420; DB 2; Length 3819;
 Best Local Similarity
                     100.0%;
                             Pred. No. 1.5e-121;
 Matches 420: Conservative
                           0: Mismatches
                                          0: Indels
                                                                0;
                                                      0:
                                                         Gaps
Qy
          1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTCGGTTCCCA 60
            2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 2493
Db
Qу
         61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
            Db
       2494 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553
Qy
        121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
            2554 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613
Db
        181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Qу
           2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673
Db
        241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Qy
            2674 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733
Db
Qу
        301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
            2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793
Db
Qу
        361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
            2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853
Db
RESULT 6
AAZ22020
    AAZ22020 standard; DNA; 3819 BP.
TD
XX
AC
    AAZ22020;
XX
DT
    24-NOV-1999
               (first entry)
XX
    Nucleotide sequence of plasmid pLC6G5.
DΕ
XX
ΚW
    Transgenic animal; heterologous antibody; hybridoma; B cell;
    transgenic mouse; human heavy chain transgene; digoxin;
KW
KW
    human light chain transgene; immortalized cell; immunoglobulin;
KW
    Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW
    transplant rejection; blood disorder; coaqulation disorder; ss.
XX
OS
    Synthetic.
XX
PN
    WO9945962-A1.
```

```
ХХ
    16-SEP-1999.
PΠ
XX
    12-MAR-1999;
                 99WO-US005535.
PF
XX
                 98US-00042353.
PR
    13-MAR-1998;
XX
    (GENP-) GENPHARM INT INC.
PΑ
XX
PΙ
    Lonberg N, Fishwild DM,
                           Ball WJ;
XX
    WPI; 1999-551219/46.
DR
XX
PT
    Novel transgenic non-human animals used to produce heterologous
PT
    antibodies.
xx
    Example 42; Page 318-320; 484pp; English.
PS
XX
CC
    The specification describes transgenic animals that are capable of
    producing a heterologous antibody. The antibodies are isolated form a
CC
    hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC
CC
    having a genome comprising a human heavy chain transgene and a human
CC
    light chain transgene. The B cells are fused to immortalized cells
CC
    suitable for generating a hybridoma, which produces a detectable amount
    of an immunoglobulin that specifically binds digoxin or Shinga-like
CC
    toxin, B cells from transgenic animals can be used to generate hybridomas
CC
CC
    expressing monoclonal high affinity human sequence antibodies. Antibodies
CC
    produced from the transgenic animals of the invention can be used to
CC
    treat human diseases, e.g. autoimmune diseases, cancer, infectious
    disease, transplant rejection, blood disorders such as coaqulation
CC
    disorders and other diseases. The present sequence is used in the course
CC
CC
    of the invention
XX
SO
    Sequence 3819 BP; 947 A; 1015 C; 912 G; 945 T; 0 U; 0 Other;
 Query Match
                       100.0%;
                               Score 420; DB 2; Length 3819;
 Best Local Similarity
                               Pred. No. 1.5e-121;
                       100.0%;
 Matches 420; Conservative
                             0; Mismatches
                                                Indels
                                                             Gaps
                                             0;
          1 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCTGGTTCCCA 60
Qу
            2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGTTCCTGCTGCTCTCGTTCCCA 2493
Db
          61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
Qу
            2494 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553
Db
Qу
        121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
            2554 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613
Db
         181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Qу
            Db
        2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673
        241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Qу
```

```
2674 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733
Db
         301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
Qу
             2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793
Db
         361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
QУ
             2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853
Db
RESULT 7
AAS99473
    AAS99473 standard; cDNA; 974 BP.
XX
AC
    AAS99473;
XX
    12-MAR-2002 (first entry)
DT
XX
    Anti-human AILIM monoclonal antibody clone Jmab-136, light chain cDNA.
DΕ
XX
    Human; antirheumatic; antiarthritic; antidiabetic; antipsoriatic;
KW
    antiallergic; antiulcer; neuroprotective; antithyroid; vasotropic;
KW
    immunosuppressive; dermatological; antiinflammatory; hepatotropic;
KW
    activation inducible lymphocyte immunomodulatory molecule; AILIM;
KW
    monoclonal antibody; allergy; rheumatoid arthritis; diabetes mellitus;
KW
    multiple sclerosis; autoimmune thyroiditis; psoriasis; hepatitis;
KW
    allergic contact-type dermatitis; chronic inflammatory dermatosis;
KW
    systemic lupus erythematosus; autoimmune disorder; inflammation; ss;
ΚW
    graft versus host reaction; immune rejection; intestinal immunity;
    ulcerative colitis; pneumonia; nephritis; vasculitis; pancreatitis.
KW
XX
OS
    Homo sapiens.
XX
PN
    WO200187981-A2.
XX
PD
    22-NOV-2001.
XX
    15-MAY-2001; 2001WO-JP004035.
ΡF
XX
PR
    18-MAY-2000; 2000JP-00147116.
    30-MAR-2001; 2001JP-00099508.
PR
XX
PΑ
     (NISB ) JAPAN TOBACCO INC.
XX
PΙ
    Tsuji T, Tezuka K, Hori N;
XX
DR
    WPI; 2002-075313/10.
DR
    P-PSDB: AAU74297.
XX
PT
    New human monoclonal antibody that binds to activation inducible
PΤ
    lymphocyte immunomodulatory molecule, useful for treating rheumatoid
PT
    arthritis, multiple sclerosis and inflammation.
XX
    Claim 45; Page 267-270; 300pp; English.
PS
XX
CC
    The invention relates to a novel human antibody (I), preferably a human
```

monoclonal antibody which binds to an activation inducible lymphocyte CCimmunomodulatory molecule (AILIM). (I) is useful for modulating signal CC transduction into a cell mediated by AILIM, for modulating proliferation CC of AILIM-expressing cells, for modulating production of a cytokine from CC AILIM-expressing cells, and for inducing antibody-dependent cytotoxicity CCagainst AILIM-expressing cells and/or immune cytolysis or apoptosis of CC AILIM-expressing cells. (I) is useful for treating, preventing or CC prophylaxis of delayed type allergy. (I) is useful for treating and CCpreventing various diseases associated with AILIM-mediated costimulatory CC transduction, and for inhibiting the onset and/or advancement of the CC CCdiseases. (I) is useful for suppression, prevention and/or treatment of CC rheumatoid arthritis, multiple sclerosis, autoimmune thyroiditis, allergic contact-type dermatitis, chronic inflammatory dermatosis, CC CC systemic lupus erythematosus, insulin-dependent diabetes mellitus, CCpsoriasis, autoimmune or allergic disorders, inflammation, graft versus host reaction, graft versus host disease, immune rejection, disorders CC caused by abnormal intestinal immunity, specifically inflammatory CCintestinal disorders such as ulcerative colitis, pneumonia, hepatitis, CC nephritis, vasculitis, and pancreatitis. (I) induces no serious CC immunorejection due to antigenicity to human, i.e., human anti-mouse CC antigenicity (HAMA) in a host. AAS99444-AAS99477 represent anti-human CCAILIM monoclonal antibody coding sequences and PCR primers of the CC CC invention XX SQ

Length 974;

Sequence 974 BP; 246 A; 282 C; 232 G; 214 T; 0 U; 0 Other;

88.2%;

```
Score 370.6; DB 6;
 Query Match
                         Pred. No. 3.3e-106;
 Best Local Similarity
                   94.1%;
 Matches 385: Conservative
                        0; Mismatches
                                         Indels
                                                   Gaps
                                                         0;
        12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
Qу
          Db
        44 CATGAGGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 103
        72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qу
          104 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 163
Db
       132 CATCACTTGTCGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
          164 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGGTTGTTAGCCTGGTATCAGCAGAAACC 223
Db
       192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qу
          224 AGGGAAAGCCCCTAAACTCCTGATCTATGTTGCATCCAGTTTGCAAAGTGGGGTCCCATC 283
Db
       252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
QУ
          284 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 343
Db
       312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qy
          344 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCGTGGACGTTCGGCCA 403
Db
       372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
           Db
       404 AGGGACCAAGGTGGAAATCAAACGAACTGTGGCTGCACCATCTGTCTTC 452
```

```
RESULT 8
AAT73441
     AAT73441 standard; DNA; 388 BP.
ID
XX
AC
     AAT73441;
ХX
     03-DEC-1997 (first entry)
DT
XX
     Human immunoglobulin light chain variable region partial transcript.
DE
XX
     Iq; affinity constant; human; antiqen; hybridoma; B cell; transgene;
KW
     transgenic; mouse; CD4; antibody; autoimmune; inflammatory;
KW
KW
     transplant rejection; ss.
XX
os
     Homo sapiens.
XX
PN
     WO9713852-A1.
XX
PD
     17-APR-1997.
XX
PF
     10-OCT-1996;
                    96WO-US016433.
XX
PR
     10-OCT-1995;
                    95US-00544404.
XX
     (GENP-) GENPHARM INT INC.
PΑ
XX
PI
     Lonberg N, Kay RM;
XX
     WPI; 1997-235888/21.
DR
XX
     Novel anti-CD4 antibody produced by transgenic mice - used in the
PT
     treatment of auto-immune disease etc.
PT
XX
PS
     Claim 44; Page 255; 396pp; English.
XX
     A novel composition has been developed which comprises an immunoglobulin
CC
     (Iq) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
CC
     -1 for binding to a predetermined human antigen. The present sequence
CC
     represents a human light chain variable region partial nucleotide
CC
     sequence, 10C5 kappa, which encodes an amino acid sequence from a claimed
CC
     immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC
     may be used in therapeutic and diagnostic applications, especially for
CC
     the treatment of human diseases. These antibodies reduce activity of CD4
CC
     cells and reduce undesirable autoimmune reactions, inflammatory response
CC
     and transplant rejection. Transgenic animals are capable of producing
CC
     heterologous antibodies of multiple isotypes by undergoing isotype
CC
     switching. These animals produce a first Ig type that is necessary for
CC
     antigen-stimulated B-cell maturation and can switch to encode and produce
CC
     one or more subsequent heterologous isotypes
CC
XX
     Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;
SO
                          87.8%; Score 368.6; DB 2;
                                                        Length 388;
  Query Match
                                   Pred. No. 9.9e-106;
                          97.7%;
  Best Local Similarity
                                                                              0;
  Matches 374; Conservative
                                0; Mismatches
                                                    9;
                                                        Indels
                                                                      Gaps
```

```
12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 71
Qу
            6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCCTGGTTCCCAGGTTCCAGATG 65
Db
         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qу
            66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
Db
        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
            126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
Db
        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qу
           186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
Qγ
           246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
Db
        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Ov
           306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
Db
        372 GGGAACCAAGCTGGAGATCAAAC 394
Qy.
           366 GGGGACCAAGCTGGAGATCAAAC 388
Db
RESULT 9
AAV39239
ID
    AAV39239 standard; DNA; 388 BP.
XX
AC
    AAV39239;
XX
DT
    18-DEC-1998 (first entry)
XX
DE
    Functional Kappa transcript isolated from transgenic cell line 10C5.
XX
    Transgenic animal; human heterologous antibody; transgene;
KW
ΚW
    isotype switching; neutrophil efflux; reperfusion injury; CD4 binding;
KW
    autoimmune reaction; inflammatory response; transplant rejection;
KW
    acid induced lung injury; acute adult respiratory distress syndrome;
    ARDS; vasculitis; septic shock; allergic reaction; asthma;
KW
KW
    cystic fibrosis; ss.
ХX
    Synthetic.
os
os
    Homo sapiens.
OS
    Mus sp.
XX
PN
    WO9824884-A1.
ХX
PD
    11-JUN-1998.
XX
PF
    01-DEC-1997;
                97WO-US021803.
XX
```

```
PR
    02-DEC-1996;
                  96US-00758417.
XX
    (GENP-) GENPHARM INT.
PΑ
XX
PΙ
    Lonberg N, Kay RM;
XX
    WPI; 1998-333306/29.
DR
XX
PT
    Hybridoma producing antibody specific for interleukin-8 - used to prevent
    efflux of neutrophils from vasculature, and treat reperfusion injury.
PT
XX
    Example 41; Page 304; 452pp; English.
PS
XX
    AAV39232-41 represent functional transcripts of a human IgGKappa anti-CD4
CC
    antibody. The sequences are isolated from 5 different transgenic mouse
CC
    hybridoma cell lines. The specification describes transgenic non-human
CC
CC
    animals, especially a mouse, which are capable of producing a human
CC
    heterologous antibodies of multiple isotypes by undergoing isotype
CC
    switching. The transgenic animals have human heavy and light chain
    transgenes. The transgenes are capable of functionally rearranging a
CC
CC
    heterologous diversity (D) gene in a variable-diversity-junction (V-D-J)
CC
    recombination. The transgenes include a heavy chain transgene comprising
CC
    at least one V, D and J gene segment, and one constant region gene
    segment. The immunoglobulin (Iq) light chain transgene comprises at least
CC
CC
    one V and J gene segment and one constant region gene segment. The gene
CC
    segments are heterologous to the transgenic animal. The antibody can be
    used to prevent efflux of neutrophils from vasculature. It can also be
CC
    used to treat reperfusion injury. CD4 binding antibodies are used to
CC
    reduce undesirable autoimmune reactions, inflammatory responses and
CC
    rejection of transplanted organs. The anti-IL-8 antibodies can reduce
CC
    tissue damage and prolong survival in animal models of acute adult
CC
CC
    respiratory distress syndrome (ARDS) and acid induced lung injury. The
    anti-IL-8 antibodies can also be used for the treatment of vasculitis,
CC
    septic shock, allergic reactions (e.g. asthma) and cystic fibrosis
CC
XX
    Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;
SO
 Query Match
                        87.8%; Score 368.6; DB 2;
                                                  Length 388;
 Best Local Similarity
                        97.7%; Pred. No. 9.9e-106;
 Matches 374; Conservative
                              0; Mismatches
                                               9;
                                                  Indels
                                                               Gaps
                                                                       0:
          12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTCCTGGTTCCCAGGTTCCAGATG 71
Qу
             6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCCTGGTTCCCAGGTTCCAGATG 65
Db
          72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qу
             Db
          66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
        -132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
             126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
Db
         192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qу
             186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
```

```
252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
Qу
             246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
Db
         312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qу
             306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
Db
         372 GGGAACCAAGCTGGAGATCAAAC 394
Qу
             366 GGGGACCAAGCTGGAGATCAAAC 388
Db
RESULT 10
AAZ21993
    AAZ21993 standard; DNA; 388 BP.
ХX
AC
    AAZ21993;
XX
\operatorname{DT}
    24-NOV-1999 (first entry)
XX
    Partial nucleotide sequence for a functional transcript 10C5-kappa.
DΕ
XX
    Transgenic animal; heterologous antibody; hybridoma; B cell;
KW
    transgenic mouse; human heavy chain transgene; digoxin; PCR primer;
KW
    human light chain transgene; immortalized cell; immunoglobulin;
KW
    Shinga-like toxin; autoimmune disease; cancer; infectious disease;
KW
    transplant rejection; blood disorder; coaquiation disorder; ss.
KW
XX
    Synthetic.
OS
OS
    Homo sapiens.
ХХ
    WO9945962-A1.
PN
XX
PD
    16-SEP-1999.
XX
                   99WO-US005535.
PF
    12-MAR-1999;
XX
PR
    13-MAR-1998;
                  98US-00042353.
XX
     (GENP-) GENPHARM INT INC.
PΑ
XX
    Lonberg N, Fishwild DM, Ball WJ;
PI
XX
DR
    WPI; 1999-551219/46.
XX
    Novel transgenic non-human animals used to produce heterologous
PT
PT
    antibodies.
XX
    Example 41; Page 305; 484pp; English.
PS
XX
    The specification describes transgenic animals that are capable of
CC
    producing a heterologous antibody. The antibodies are isolated form a
CC
    hybridoma, comprising B cells, that is obtained from a transgenic mouse
CC
    having a genome comprising a human heavy chain transgene and a human
CC
    light chain transgene. The B cells are fused to immortalized cells
CC
    suitable for generating a hybridoma, which produces a detectable amount
CC
```

```
toxin. B cells from transgenic animals can be used to generate hybridomas
CC
    expressing monoclonal high affinity human sequence antibodies. Antibodies
CC
    produced from the transgenic animals of the invention can be used to
CC
    treat human diseases, e.g. autoimmune diseases, cancer, infectious
CC
    disease, transplant rejection, blood disorders such as coagulation
CC
    disorders and other diseases. The present sequence represents a partial
CC
    nucleotide sequence for a functional transcript used in the course of the
CC
    invention
CC
XX
    Sequence 388 BP; 89 A; 107 C; 97 G; 95 T; 0 U; 0 Other;
SO
 Query Match
                      87.8%; Score 368.6; DB 2;
                                              Length 388;
                      97.7%;
                            Pred. No. 9.9e-106;
 Best Local Similarity
 Matches 374; Conservative
                            0:
                              Mismatches
                                              Indels
                                                          Gaps
                                                                 0:
         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCCAGGTTCCAGATG 71
Qy
            6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTCTGGTTCCCAGGTTCCAGATG 65
Db
         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qу
            66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
Db
        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
            126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
Db
        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
QУ
            186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
QУ
            246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
Db
        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qy
            306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
Db
        372 GGGAACCAAGCTGGAGATCAAAC 394
Qу
            366 GGGGACCAAGCTGGAGATCAAAC 388
Db
RESULT 11
ABT31882
    ABT31882 standard; DNA; 728 BP.
ID
XX
AC
    ABT31882;
XX
DT
    01-MAY-2003 (first entry)
XX
    Anti-CD40 monoclonal antibody related DNA SEQ ID No 65.
DE
XX
KW
    Antiallergic; haemostatic; immunomodulator; cytostatic; antibody;
    human CD40; IL-12; LPS; lipopolysaccharide; IFNqamma; interferon gamma;
KW
```

of an immunoglobulin that specifically binds digoxin or Shinga-like

CC

```
dendritic cell; high G28-5; CD95 expression; high G28-5; B cell line;
KW
    immunoactivator; anti-tumour agent; immunosuppressant; allergy;
KW
    autoimmune disease; coaqulation factor VIII inhibitor; anti-CD40; gene;
ΚW
KW
    ds.
XX
    Unidentified.
OS
XX
    WO200288186-A1.
PN
XX
    07-NOV-2002.
PD
XX
    26-APR-2002; 2002WO-JP004292.
PF
XX
PR
    27-APR-2001; 2001WO-US013672.
     11-MAY-2001; 2001JP-00142482.
PR
    05-OCT-2001; 2001JP-00310535.
PR
    26-OCT-2001; 2001US-00040244.
PR
XX
PΑ
     (KIRI ) KIRIN BEER KK.
XX
PI
    Mikayama T, Yoshida H, Force WR,
                                       Chen X, Takahashi N;
XX
DR
    WPI; 2003-120463/11.
     P-PSDB; ABJ36940.
DR
XX
    Anti-CD40 monoclonal antibody with antagonist/agonist activity to CD40,
PT
    or functional fragment, is useful in the treatment of e.g. autoimmune
PT
PT
     diseases or cancer.
XX
     Claim 16; Page 59-60; 94pp; Japanese.
PS
XX
    The invention relates to an antibody to human CD40, or its functional
CC
     fragment, has at least one of the following properties: acting on
CC
    dendritic cells to produce IL-12 in the presence of LPS
CC
     (lipopolysaccharide) and IFNgamma (interferon gamma); acting on dendritic
CC
    cells to activate maturity of the dendritic cells with high G28-5
CC
    antibody; and activating CD95 expression with high G28-5 antibody against
CC
CC
    B cell line. Such antibodies or functional fragments can be used as
CC
     immunoactivators, anti-tumour agents, immunosuppressants, and as remedies
CC
     for autoimmune diseases, allergy or coagulation factor VIII inhibitors
     syndrome. This polynucleotide sequence represents a coding DNA sequence
CC
     relating to the anti-CD40 monoclonal antibody of the invention
CC
XX
    Sequence 728 BP; 183 A; 201 C; 195 G; 149 T; 0 U; 0 Other;
SQ
  Query Match
                         87.1%;
                                Score 365.8; DB 8;
 Best Local Similarity
                         93.4%;
                                Pred. No. 9.7e-105;
                                                                          0;
  Matches 382; Conservative
                               0; Mismatches
                                                27;
                                                     Indels
          12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTCCTGGTTCCCAGGTTCCAGATG 71
Qу
             64 CATGAGGGTCCCCGCTCAGCTCCTGGGGGCTCCTGCTGCTCCTGGTTCCCAGGTTCCAGATG 123
Db
          72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qу
             124 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGGATCTGTAGGAGACAGAGTCAC 183
Db
```

```
132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
            184 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 243
Db
        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qу
            244 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTCCCATC 303
Db
        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
Qу
            304 AAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 363
Db
        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qy
            364 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTCGGCCA 423
Dh
        372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
             424 AGGGACCAAGGTGGAGATCAAACGTACGGTGGCTGCACCATCTGTCTTC 472
Db
RESULT 12
ADM47072
    ADM47072 standard; DNA; 711 BP.
ID
XX
AC
    ADM47072;
XX
DT
    03-JUN-2004 (first entry)
XX
    Mouse anti-human G-CSF antibody light chain gene.
DE
XX
    methylotroph yeast; mammalian sugar chain; OCH1; alpha-1;
KW
    6-mannosyl transferase; alpha-1; 2-mannosidase;
KW
    orotidin-5'-phosphate decarboxylase; URA3;
KW
    phosphoribosyl-amino-imidazole succinocarboxamide synthase; ADE1;
KW
    imidazole-glycerol-phosphate dehydratase; HIS3;
KW
    3-isopropyl malate dehydrogenase; LEU2; proteinase A; proteinase B; PRB1;
KW
    PEP4; YPS1; KTR1; MNN9; AOX; GAPDH; mannosyl transferase;
KW
KW
    glyceraldehyde 3-phosphate dehydrogenase; mannose glycoprotein; ds; gene.
XX
OS
    Mus sp.
XX
PN
    WO2003091431-A1.
XX
PD
    06-NOV-2003.
XX
    28-APR-2003; 2003WO-JP005464.
PF
XX
    26-APR-2002; 2002JP-00127677.
PR
XX
    (KIRI ) KIRIN BEER KK.
PΑ
    (NAAD-) NAT INST ADVANCED IND SCI & TECHNOLOGY.
PA
XX
    Kobayashi K, Kitaqawa Y,
PΙ
                            Komeda T. Kawashima N. Jigami Y:
PI
    Chiba Y;
XX
DR
    WPI; 2003-854401/79.
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XX
PT
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Producing methylotroph yeast that expresses mammalian sugar chains by disrupting the OCH1 gene and inserting an alpha-1,2-mannosidase gene.

PT XX PS

Example 28; SEQ ID NO 91; 247pp; Japanese.

XX CC

The invention relates to the production of a methylotroph yeast that produces mammalian sugar chains, comprising disrupting the OCH1 gene in the yeast that encodes for alpha-1,6-mannosyl transferase and inserting and expressing the alpha-1,2-mannosidase gene. The specification also includes DNA sequences encoding: (a) orotidin-5'-phosphate decarboxylase (URA3); (b) phosphoribosyl-amino-imidazole succinocarboxamide synthase (ADE1); (c) imidazole-glycerol-phosphate dehydratase (HIS3); (d) 3isopropyl malate dehydrogenase (LEU2); (e) alpha-1,6-mannosyl transferase (OCH1); (f) proteinase A (PEP4); (q) proteinase B (PRB1); and (h) aspartic protease (YPS1), mannosyl transferase (KTR1 or MNN9), alcohol oxidase (AOX) and glyceraldehyde 3-phosphate dehydrogenase (GAPDH) gene sequences. The yeast is used for the production of human and mammalian high mannose glycoproteins with high yield and purity. The method is also useful for producing hybrid or complex sugar chains containing mammalian type chains. This sequence represents the gene encoding a mouse antihuman G-CSF antibody light chain used in the invention.

CC XX SO

Sequence 711 BP; 176 A; 203 C; 182 G; 150 T; 0 U; 0 Other;

Score 365.6; DB 11; Query Match 87.0%; Length 711; Best Local Similarity 93.0%; Pred. No. 1.1e-104; Matches 383; Conservative 0; Mismatches Indels Gaps 0; 0; 9 CACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAG 68 Qу 3 CACCATGAGGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCCCAGGTGCACG 62 Db 69 ATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGT 128 Qу 63 ATGTGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGT 122 Db 129 CACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAA 188 Qу 123 CACCATCACTTGTCGGGCGAGTCAGGTTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAA 182 Db 189 ACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCC 248 Qу 183 ACCAGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCC 242 Db 249 ATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA 308 Qу 243 ATCAAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA 302 Db 309 GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGG 368 Qy 303 GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAACAGTTTCCCTCCGACGTTCGG 362 Db 369 TCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420 Qу 363 CCAAGGGACCAAGGTGGAAATCAAACGTACGGTGGCTGCACCATCTGTCTTC 414 Db

```
RESULT 13
ADE28412
     ADE28412 standard; cDNA; 705 BP.
ID
XX
AC
     ADE28412;
XX
     29-JAN-2004 (first entry)
DT
XX
     Human anti-CD40 antibody 10-8-3 variable region light chain cDNA.
DE
XX
     anti-CD40 monoclonal antibody; CD40; cytostatic; virucide; antibacterial;
KW
     immunostimulant; anti-HIV; hyperproliferative; cancer; viral;
KW
     bacterial infection; immunodeficiency; neutropenia; HIV; gene therapy;
KW
KW
     human; variable region light chain; ss; gene; 10-8-3.
XX
os
     Homo sapiens.
XX
PN
     WO2003040170-A2.
XX
     15-MAY-2003.
PD
XX
PF
     08-NOV-2002; 2002WO-US036107.
XX
     09-NOV-2001; 2001US-0348980P.
PR
XX
     (PFIZ ) PFIZER PROD INC.
PΑ
     (ABGE-) ABGENIX INC.
PA
XX
PI
     Bedian V, Gladue RP, Corvalan J, Jia X, Feng X;
XX
     WPI; 2003-441521/41.
DR
     P-PSDB; ADE28413.
DR
XX
     New chimeric or human monoclonal antibody or its antigen-binding portion
PT
     that specifically binds to and activates human CD40, useful for enhancing
PT
     an immune response in a human, or treating cancer, HIV, neutropenia or
PT
PT
     viral infections.
XX
PS
     Claim 24; SEQ ID NO 19; 177pp; English.
XX
     The invention relates to a novel chimeric or human monoclonal antibody or
CC
     its antigen-binding portion that specifically binds to and activates
CC
     human CD40. The anti-CD40 antibody of the invention demonstrates
CC
     cytostatic, virucide, antibacterial, immunostimulant and anti-HIV
CC
CC
     activities and may be useful for treating a hyperproliferative disorder
CC
     such as cancer, viral and bacterial infection or genetic, primary or
     combined immunodeficiency conditions including neutropenia or HIV
CC
     infection. The anti-CD40 antibodies may also be useful for detecting CD40
CC
     in a biological sample in vitro or in vivo, as well as during gene
CC
     therapy procedures. The current sequence is that of the human anti-CD40
CC
     antibody variable region light chain cDNA of the invention.
CC
XX
     Sequence 705 BP; 172 A; 201 C; 179 G; 153 T; 0 U; 0 Other;
SO
                                  Score 361.6; DB 10; Length 705;
  Query Match
                          86.1%;
  Best Local Similarity
                          92.9%; Pred. No. 2e-103;
```

```
Matches
        379; Conservative
                          0; Mismatches
                                        29; Indels
                                                               0;
        13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTGCTCCCAGGTTCCCAGATGC 72
Qу
           1 ATGAGGCTCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTCGGTTCCCAGGTTCCAGATGC 60
Db
        73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
Qу
           61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120
Db
        133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
Qу
           121 ATCACTTGTCGGGCGAGTCAGCCTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAACCA 180
Db
        193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
Qу
           181 GGGAAAGCCCCTAAACTCCTGATTTATTCTGCCTCCGGTTTGCAAAGTGGGGTCCCATCA 240
Db
        253 AGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
Qy
           Db
        241 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300
        313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
Qу
           301 GAAGATTTTGCAACTTACTATTGTCAACAGACTGACAGTTTCCCGCTCACTTTCGGCGGC 360.
Db
        373 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
           361 GGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 408
Db
RESULT 14
ADE28428
ID
    ADE28428 standard; cDNA; 705 BP.
XX
AC
   ADE28428;
XX
DT
    29-JAN-2004 (first entry) .
XX
DE
    Human anti-CD40 antibody 21-2-1 variable region light chain cDNA.
XX
    anti-CD40 monoclonal antibody; CD40; cytostatic; virucide; antibacterial;
KW
    immunostimulant; anti-HIV; hyperproliferative; cancer; viral;
KW
KW
    bacterial infection; immunodeficiency; neutropenia; HIV; gene therapy;
    human; variable region light chain; ss; gene; 21-2-1.
KW
XX
OS
    Homo sapiens.
XX
    WO2003040170-A2.
PN
XX
PD
    15-MAY-2003.
XX
PF
    08-NOV-2002; 2002WO-US036107.
XX
PR
    09-NOV-2001; 2001US-0348980P.
XX
PΑ
    (PFIZ ) PFIZER PROD INC.
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(ABGE-) ABGENIX INC.
PA
XX
PΙ
    Bedian V, Gladue RP, Corvalan J, Jia X, Feng X;
XX
    WPI; 2003-441521/41.
DR
    P-PSDB; ADE28429.
DR
XX
PT
    New chimeric or human monoclonal antibody or its antiqen-binding portion
    that specifically binds to and activates human CD40, useful for enhancing
PT
    an immune response in a human, or treating cancer, HIV, neutropenia or
PT
    viral infections.
PT
XX
    Claim 24; SEQ ID NO 35; 177pp; English.
PS
XX
CC
    The invention relates to a novel chimeric or human monoclonal antibody or
CC
    its antigen-binding portion that specifically binds to and activates
CC
    human CD40. The anti-CD40 antibody of the invention demonstrates
    cytostatic, virucide, antibacterial, immunostimulant and anti-HIV
CC
CC
    activities and may be useful for treating a hyperproliferative disorder
CC
    such as cancer, viral and bacterial infection or genetic, primary or
CC
    combined immunodeficiency conditions including neutropenia or HIV
CC
    infection. The anti-CD40 antibodies may also be useful for detecting CD40
CC
    in a biological sample in vitro or in vivo, as well as during gene
CC
    therapy procedures. The current sequence is that of the human anti-CD40
CC
    antibody variable region light chain cDNA of the invention.
XX
    Sequence 705 BP; 177 A; 200 C; 175 G; 153 T; 0 U; 0 Other;
SQ
  Query Match
                       86.1%; Score 361.6; DB 10; Length 705;
  Best Local Similarity
                       92.9%;
                             Pred. No. 2e-103:
  Matches 379; Conservative
                             0: Mismatches
                                           29:
                                                Indels
                                                                   0:
         13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCCAGGTTCCAGATGC 72
Qу
            1 ATGAGGCTCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCCCAGGTTCCAGATGC 60
Db
Qy
         73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
            Db
         61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120
        133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
Qу
            121 ATCACTTGTCGGGCGAGTCAGGGTATTTACAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180
Db
        193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTTGCAAAGTGGTGTCCCATCA 252
Qу
            181 GGGAAAGCCCCTAACCTCCTGATCTATACTGCATCCACTTTACAAAGTGGGGTCCCATCA 240
Db
        253 AGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACCTCTCACCATCAGCAGCCTGCAGCCT 312
Qу
            241 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAACCT 300
Db
Qу
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XX
                 (first entry)
DT
     03-DEC-1997
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KW
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PR
     10-OCT-1995;
                    95US-00544404.
XX
     (GENP-) GENPHARM INT INC.
PΑ
XX
PΙ
     Lonberg N, Kay RM;
XX
     WPI; 1997-235888/21.
DR
XX
PT
     Novel anti-CD4 antibody produced by transgenic mice - used in the
     treatment of auto-immune disease etc.
PT
XX
PS
     Claim 44; Page 256; 396pp; English.
XX
CC
     A novel composition has been developed which comprises an immunoglobulin
CC
     (Ig) having an affinity constant (Ka) of at least 2 multiply 1000000000 M
     -1 for binding to a predetermined human antigen. The present sequence
CC
CC
     represents a human light chain variable region partial nucleotide
     sequence, 4D1 kappa, which encodes an amino acid sequence from a claimed
CC
     immunoglobulin that specifically binds human CD4. The anti-CD4 antibodies
CC
     may be used in therapeutic and diagnostic applications, especially for
CC
     the treatment of human diseases. These antibodies reduce activity of CD4
CC
     cells and reduce undesirable autoimmune reactions, inflammatory response
CC
     and transplant rejection. Transgenic animals are capable of producing
CC
     heterologous antibodies of multiple isotypes by undergoing isotype
CC-
     switching. These animals produce a first Ig type that is necessary for
CC
     antiqen-stimulated B-cell maturation and can switch to encode and produce
CC
     one or more subsequent heterologous isotypes
CC
XX
     Sequence 439 BP; 100 A; 122 C; 106 G; 111 T; 0 U; 0 Other;
SO
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Query Match 85.2%; Score 357.8; DB 2; Length 439;

Best Local Similarity 92.2%; Pred. No. 2.6e-102; Matches 377; Conservative 0: Mismatches 32; Indels 0; 12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCCAGGTTCCAGATG 71 Qу 6 CATGGAGTTCCCCGTTCAGCTCCTGGGGCTCCTGCTGCTCTTTTCCCAGGTGCCAGATG 65 Db 72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131 Qу 66 TGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGTCAC 125 Db 132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191 Qу 126 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 185 Db 192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251 Qу 186 AGAGAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245 Db 252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311 Qу 246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305 Db 312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371 Qy 306 TGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTTGGCCA 365 Db 372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420 Qу 366 GGGGACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414 Db

Search completed: December 2, 2004, 13:06:03 Job time: 326.197 secs

> GenCore version 5.1.6 Copyright (c) 1993 - 2004 Compugen Ltd.

OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:03; Search time 61.3429 Seconds

(without alignments)

4866.596 Million cell updates/sec

Title: US-08-728-463B-220

Perfect score: 420

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Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 824507 segs, 355394441 residues

Total number of hits satisfying chosen parameters: 1649014

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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	1 420	100.0	420	3	US-09-042-353-420	Sequence 420, App
	2 420	100.0	420	3	US-08-758-417A-220	Sequence 220, App
	3 420	100.0	3819	3	US-09-042-353-393	Sequence 393, App
	420	100.0	3819	3	US-08-758-417A-243	Sequence 243, App
	368.6	87.8	388	3	US-09-042-353-358	Sequence 358, App
	368.6	87.8	388	′3	US-08-758-417A-206	Sequence 206, App
	7 357.8	85.2	439	3	US-09-042-353-360	Sequence 360, App
	357.8	85.2	439	3	US-08-758-417A-208	Sequence 208, App
	9 332.2	79.1	714	4	US-09-472-087-62	Sequence 62, Appl
10		78.7	1066	1	US-08-157-101A-4	Sequence 4, Appli
13		77.6	19040	4	US-09-343-485A-3	Sequence 3, Appli
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1.		77.0	384	1	US-08-468-671-13	Sequence 13, Appl
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ALIGNMENTS

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US-09-042-353-420
; Sequence 420, Application US/09042353
  Patent No. 6255458
   GENERAL INFORMATION:
    APPLICANT: Lonberg, Nils
     APPLICANT: Kay, Robert M.
    TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
    TITLE OF INVENTION: Producing Heterologous Antibodies
    NUMBER OF SEQUENCES: 421
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend and Crew LLP
      STREET: Two Embarcadero Center, Eighth Floor
      CITY: San Francisco
      STATE: California
      COUNTRY: USA
       ZIP: 94111-3834
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/09/042,353
       FILING DATE: 13-MAR-1998
       CLASSIFICATION: 800
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/810,279
       FILING DATE: 17-DEC-1991
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/853,408
       FILING DATE: 18-MAR-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/904,068
       FILING DATE: 23-JUN-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/990,860
       FILING DATE: 16-DEC-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/053,131
       FILING DATE: 26-APR-1993
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APPLICATION NUMBER: US 08/096,762
      FILING DATE: 22-JUL-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/155,301
      FILING DATE: 18-NOV-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/161,739
      FILING DATE: 03-DEC-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/165,699
      FILING DATE: 10-DEC-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/209,741
      FILING DATE: 09-MAR-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/352,322
      FILING DATE: 07-DEC-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/544,404
      FILING DATE: 10-OCT-1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/728,463
      FILING DATE: 10-OCT-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: WO PCT/US96/16433
      FILING DATE: 10-OCT-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/758,417
      FILING DATE: 02-DEC-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: WO PCT/US97/21803
      FILING DATE: 01-DEC-1997
    ATTORNEY/AGENT INFORMATION:
      NAME: Apple, Randolph T.
      REGISTRATION NUMBER: 36,429
      REFERENCE/DOCKET NUMBER: 014643-009040US
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (415) 576-0200
      TELEFAX: (415) 576-0300
  INFORMATION FOR SEQ ID NO: 420:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 420 base pairs
      TYPE: nucleic acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: DNA
US-09-042-353-420
                       100.0%; Score 420; DB-3; Length 420;
 Ouery Match
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 Matches 420; Conservative 0; Mismatches 0; Indels 0; Gaps
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; Sequence 220, Application US/08758417A
 Patent No. 6300129
   GENERAL INFORMATION:
       APPLICANT: Lonberg, Nils
                 Kay, Robert M.
       TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
                        Producing Heterologous Antibodies
       NUMBER OF SEQUENCES: 417
       CORRESPONDENCE ADDRESS:
           ADDRESSEE: Townsend and Townsend and Crew LLP
           STREET: Two Embarcadero Center, Eighth Floor
           CITY: San Francisco
           STATE: California
           COUNTRY: USA
           ZIP: 94111-3834
       COMPUTER READABLE FORM:
           MEDIUM TYPE: Floppy disk
           COMPUTER: IBM PC compatible
           OPERATING SYSTEM: PC-DOS/MS-DOS
           SOFTWARE: PatentIn Release #1.0, Version #1.30
       CURRENT APPLICATION DATA:
           APPLICATION NUMBER: US/08/758,417A
           FILING DATE: 02-Dec-1996
           CLASSIFICATION: <Unknown>
       PRIOR APPLICATION DATA:
           APPLICATION NUMBER: US 08/728,463
           FILING DATE: 10-OCT-1996
           APPLICATION NUMBER: US 08/544,404
           FILING DATE: 10-OCT-1995
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APPLICATION NUMBER: US 08/352,322

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FILING DATE: 07-DEC-1994
           APPLICATION NUMBER: US 08/209,741
            FILING DATE: 09-MAR-1994
           APPLICATION NUMBER: US 08/165,699
            FILING DATE: 10-DEC-1993
           APPLICATION NUMBER: US 08/161,739
            FILING DATE: 03-DEC-1993
           APPLICATION NUMBER: US 08/155,301
            FILING DATE: 18-NOV-1993
           APPLICATION NUMBER: US 08/096,762
            FILING DATE: 22-JUL-1993
           APPLICATION NUMBER: US 08/053,131
            FILING DATE: 26-APR-1993
            APPLICATION NUMBER: US 07/990,860
            FILING DATE: 16-DEC-1992
       ATTORNEY/AGENT INFORMATION:
           NAME: Serafini, Andrew T.
            REGISTRATION NUMBER: 41,303
            REFERENCE/DOCKET NUMBER: 014643-009030US
       TELECOMMUNICATION INFORMATION:
           TELEPHONE: (415) 576-0200
           TELEFAX: (415) 576-0300
   INFORMATION FOR SEQ ID NO: 220:
       SEQUENCE CHARACTERISTICS:
           LENGTH: 420 base pairs
            TYPE: nucleic acid
            STRANDEDNESS: single
           TOPOLOGY: linear
       MOLECULE TYPE: DNA
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US-08-758-417A-220
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 Best Local Similarity
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 Patent No. 6255458
  GENERAL INFORMATION:
    APPLICANT: Lonberg, Nils
    APPLICANT: Kay, Robert M.
    TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
    TITLE OF INVENTION: Producing Heterologous Antibodies
    NUMBER OF SEQUENCES: 421
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend and Crew LLP
      STREET: Two Embarcadero Center, Eighth Floor
      CITY: San Francisco
      STATE: California
      COUNTRY: USA
      ZIP: 94111-3834
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
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      FILING DATE: 13-MAR-1998
      CLASSIFICATION: 800
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/810,279
      FILING DATE: 17-DEC-1991
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/853,408
      FILING DATE: 18-MAR-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/904,068
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      APPLICATION NUMBER: US 08/096,762
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      APPLICATION NUMBER: US 08/155,301
      FILING DATE: 18-NOV-1993
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APPLICATION NUMBER: US 08/161,739

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      FILING DATE: 02-DEC-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: WO PCT/US97/21803
      FILING DATE: 01-DEC-1997
    ATTORNEY/AGENT INFORMATION:
      NAME: Apple, Randolph T.
      REGISTRATION NUMBER: 36,429
      REFERENCE/DOCKET NUMBER: 014643-009040US
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (415) 576-0200
      TELEFAX: (415) 576-0300
  INFORMATION FOR SEQ ID NO: 393:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 3819 base pairs
      TYPE: nucleic acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: DNA
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 Patent No. 6300129
   GENERAL INFORMATION:
        APPLICANT: Lonberg, Nils
                  Kay, Robert M.
        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
                          Producing Heterologous Antibodies
        NUMBER OF SEQUENCES: 417
        CORRESPONDENCE ADDRESS:
            ADDRESSEE: Townsend and Townsend and Crew LLP
            STREET: Two Embarcadero Center, Eighth Floor
            CITY: San Francisco
            STATE: California
            COUNTRY: USA
            ZIP: 94111-3834
        COMPUTER READABLE FORM:
            MEDIUM TYPE: Floppy disk
            COMPUTER: IBM PC compatible
            OPERATING SYSTEM: PC-DOS/MS-DOS
            SOFTWARE: PatentIn Release #1.0, Version #1.30
        CURRENT APPLICATION DATA:
            APPLICATION NUMBER: US/08/758,417A
            FILING DATE: 02-Dec-1996
            CLASSIFICATION: <Unknown>
        PRIOR APPLICATION DATA:
            APPLICATION NUMBER: US 08/728,463
            FILING DATE: 10-OCT-1996
            APPLICATION NUMBER: US 08/544,404
            FILING DATE: 10-OCT-1995
            APPLICATION NUMBER: US 08/352,322
            FILING DATE: 07-DEC-1994
            APPLICATION NUMBER: US 08/209,741
            FILING DATE: 09-MAR-1994
            APPLICATION NUMBER: US 08/165,699
            FILING DATE: 10-DEC-1993
            APPLICATION NUMBER: US 08/161,739
            FILING DATE: 03-DEC-1993
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APPLICATION NUMBER: US 08/155,301

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FILING DATE: 18-NOV-1993
           APPLICATION NUMBER: US 08/096,762
           FILING DATE: 22-JUL-1993
           APPLICATION NUMBER: US 08/053,131
           FILING DATE: 26-APR-1993
           APPLICATION NUMBER: US 07/990,860
           FILING DATE: 16-DEC-1992
       ATTORNEY/AGENT INFORMATION:
           NAME: Serafini, Andrew T.
           REGISTRATION NUMBER: 41,303
           REFERENCE/DOCKET NUMBER: 014643-009030US
       TELECOMMUNICATION INFORMATION:
           TELEPHONE: (415) 576-0200
           TELEFAX: (415) 576-0300
   INFORMATION FOR SEQ ID NO: 243:
       SEQUENCE CHARACTERISTICS:
           LENGTH: 3819 base pairs
           TYPE: nucleic acid
           STRANDEDNESS: single
           TOPOLOGY: linear
       MOLECULE TYPE: DNA
       SEQUENCE DESCRIPTION: SEQ ID NO: 243:
US-08-758-417A-243
                     100.0%;
                            Score 420; DB 3; Length 3819;
 Query Match
                     100.0%;
                            Pred. No. 3.9e-123;
 Best Local Similarity
                                                               0:
                                             Indels
                           0; Mismatches
                                         0;
                                                        Gaps
 Matches 420; Conservative
                                                     0:
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QУ
           2434 AAGCTTGCCACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCA 2493
Db
         61 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 120
Ov
           2494 GGTTCCAGATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGA 2553
Db
        121 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 180
Qy
           2554 GACAGAGTCACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTAT 2613
Db
        181 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 240
Qу
           2614 CAGCATAAACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGT 2673
Db
        241 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 300
Qy
           2674 GGTGTCCCATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGC 2733
Db
        301 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 360
QУ
           2734 AGCCTGCAGCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTAC 2793
Db
        361 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
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           2794 ACTTTTGGTCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 2853
Db
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RESULT 5
US-09-042-353-358
; Sequence 358, Application US/09042353
 Patent No. 6255458
   GENERAL INFORMATION:
    APPLICANT: Lonberg, Nils
    APPLICANT: Kay, Robert M.
    TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
    TITLE OF INVENTION: Producing Heterologous Antibodies
    NUMBER OF SEQUENCES: 421
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend and Crew LLP
      STREET: Two Embarcadero Center, Eighth Floor
      CITY: San Francisco
      STATE: California
      COUNTRY: USA
      ZIP: 94111-3834
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/042,353
       FILING DATE: 13-MAR-1998
      CLASSIFICATION: 800
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/810,279
       FILING DATE: 17-DEC-1991
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/853,408
       FILING DATE: 18-MAR-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/904,068
       FILING DATE: 23-JUN-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/990,860
       FILING DATE: 16-DEC-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/053,131
       FILING DATE: 26-APR-1993
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/096,762
       FILING DATE: 22-JUL-1993
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/155,301
       FILING DATE: 18-NOV-1993
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/161,739
       FILING DATE: 03-DEC-1993
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/165,699
       FILING DATE: 10-DEC-1993
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/209,741
       FILING DATE: 09-MAR-1994
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PRIOR APPLICATION DATA:

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APPLICATION NUMBER: US 08/352,322
     FILING DATE: 07-DEC-1994
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/544,404
     FILING DATE: 10-OCT-1995
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/728,463
     FILING DATE: 10-OCT-1996
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: WO PCT/US96/16433
     FILING DATE: 10-OCT-1996
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/758,417
     FILING DATE: 02-DEC-1996
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: WO PCT/US97/21803
     FILING DATE: 01-DEC-1997
    ATTORNEY/AGENT INFORMATION:
     NAME: Apple, Randolph T.
     REGISTRATION NUMBER: 36,429
     REFERENCE/DOCKET NUMBER: 014643-009040US
    TELECOMMUNICATION INFORMATION:
     TELEPHONE: (415) 576-0200
     TELEFAX: (415) 576-0300
  INFORMATION FOR SEQ ID NO: 358:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 388 base pairs
     TYPE: nucleic acid
     STRANDEDNESS: single
     TOPOLOGY: linear
    MOLECULE TYPE: DNA
US-09-042-353-358
                      87.8%; Score 368.6; DB 3; Length 388;
 Query Match
 Best Local Similarity 97.7%; Pred. No. 3.1e-107;
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 Matches 374; Conservative
                           0; Mismatches
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                                              Indels
                                                       0; Gaps
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Qу
            6 CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTCTGGTTCCCAGGTTCCAGATG 65
Db
         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qу
            66 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
Db
        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
            126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
Db
        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qу
            186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
Qy.
            246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
Db
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312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qу
             306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
Db
         372 GGGAACCAAGCTGGAGATCAAAC 394
QУ
             366 GGGGACCAAGCTGGAGATCAAAC 388
RESULT 6
US-08-758-417A-206
; Sequence 206, Application US/08758417A
; Patent No. 6300129
   GENERAL INFORMATION:
        APPLICANT: Lonberg, Nils
                   Kay, Robert M.
        TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
                            Producing Heterologous Antibodies
        NUMBER OF SEQUENCES: 417
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: Townsend and Townsend and Crew LLP
             STREET: Two Embarcadero Center, Eighth Floor
             CITY: San Francisco
             STATE: California
             COUNTRY: USA
             ZIP: 94111-3834
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Floppy disk
             COMPUTER: IBM PC compatible
             OPERATING SYSTEM: PC-DOS/MS-DOS
             SOFTWARE: PatentIn Release #1.0, Version #1.30
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/08/758,417A
             FILING DATE: 02-Dec-1996
             CLASSIFICATION: <Unknown>
        PRIOR APPLICATION DATA:
             APPLICATION NUMBER: US 08/728,463
             FILING DATE: 10-OCT-1996
             APPLICATION NUMBER: US 08/544,404
             FILING DATE: 10-OCT-1995
             APPLICATION NUMBER: US 08/352,322
             FILING DATE: 07-DEC-1994
             APPLICATION NUMBER: US 08/209,741
             FILING DATE: 09-MAR-1994
             APPLICATION NUMBER: US 08/165,699
             FILING DATE: 10-DEC-1993
             APPLICATION NUMBER: US 08/161,739
             FILING DATE: 03-DEC-1993
             APPLICATION NUMBER: US 08/155,301
             FILING DATE: 18-NOV-1993
             APPLICATION NUMBER: US 08/096,762
             FILING DATE: 22-JUL-1993
             APPLICATION NUMBER: US 08/053,131
             FILING DATE: 26-APR-1993
             APPLICATION NUMBER: US 07/990,860
             FILING DATE: 16-DEC-1992
```

ATTORNEY/AGENT INFORMATION:

```
NAME: Serafini, Andrew T.
           REGISTRATION NUMBER: 41,303
           REFERENCE/DOCKET NUMBER: 014643-009030US
       TELECOMMUNICATION INFORMATION:
           TELEPHONE: (415) 576-0200
           TELEFAX: (415) 576-0300
   INFORMATION FOR SEQ ID NO: 206:
       SEQUENCE CHARACTERISTICS:
           LENGTH: 388 base pairs
           TYPE: nucleic acid
           STRANDEDNESS: single
           TOPOLOGY: linear
       MOLECULE TYPE: DNA
       SEQUENCE DESCRIPTION: SEQ ID NO: 206:
US-08-758-417A-206
                     87.8%; Score 368.6; DB 3;
                                             Length 388;
 Query Match
                           Pred. No. 3.1e-107;
 Best Local Similarity 97.7%;
 Matches 374; Conservative
                           0; Mismatches
                                             Indels
                                                        Gaps
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Qу
           CATGATGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCTGGTTCCCAGGTTCCAGATG 65
Db
         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qу
           CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 125
Db
        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
           126 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 185
Db
        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qy
           186 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
Qy
           Db
        246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qу
           306 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGCCA 365
Db
        372 GGGAACCAAGCTGGAGATCAAAC 394
Qу
           366 GGGGACCAAGCTGGAGATCAAAC 388
Db
RESULT 7
US-09-042-353-360
; Sequence 360, Application US/09042353
 Patent No. 6255458
  GENERAL INFORMATION:
    APPLICANT: Lonberg, Nils
    APPLICANT: Kay, Robert M.
    TITLE OF INVENTION: Transgenic No. 6255458-Human Animals for
```

```
TITLE OF INVENTION: Producing Heterologous Antibodies
NUMBER OF SEQUENCES: 421
CORRESPONDENCE ADDRESS:
  ADDRESSEE: Townsend and Townsend and Crew LLP
  STREET: Two Embarcadero Center, Eighth Floor
  CITY: San Francisco
  STATE: California
  COUNTRY: USA
  ZIP: 94111-3834
COMPUTER READABLE FORM:
  MEDIUM TYPE: Floppy disk
  COMPUTER: IBM PC compatible
  OPERATING SYSTEM: PC-DOS/MS-DOS
  SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
  APPLICATION NUMBER: US/09/042,353
  FILING DATE: 13-MAR-1998
  CLASSIFICATION: 800
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 07/810,279
  FILING DATE: 17-DEC-1991
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 07/853,408
  FILING DATE: 18-MAR-1992
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 07/904,068
  FILING DATE: 23-JUN-1992
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 07/990,860
  FILING DATE: 16-DEC-1992
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/053,131
  FILING DATE: 26-APR-1993
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/096,762
  FILING DATE: 22-JUL-1993
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/155,301
  FILING DATE: 18-NOV-1993
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/161,739
  FILING DATE: 03-DEC-1993
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/165,699
  FILING DATE: 10-DEC-1993
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/209,741
  FILING DATE: 09-MAR-1994
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/352,322
  FILING DATE: 07-DEC-1994
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/544,404
  FILING DATE: 10-OCT-1995
PRIOR APPLICATION DATA:
  APPLICATION NUMBER: US 08/728,463
  FILING DATE: 10-OCT-1996
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PRIOR APPLICATION DATA:
     APPLICATION NUMBER: WO PCT/US96/16433
     FILING DATE: 10-OCT-1996
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/758,417
     FILING DATE: 02-DEC-1996
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: WO PCT/US97/21803
     FILING DATE: 01-DEC-1997
   ATTORNEY/AGENT INFORMATION:
     NAME: Apple, Randolph T.
     REGISTRATION NUMBER: 36,429
     REFERENCE/DOCKET NUMBER: 014643-009040US
    TELECOMMUNICATION INFORMATION:
     TELEPHONE: (415) 576-0200
     TELEFAX: (415) 576-0300
  INFORMATION FOR SEQ ID NO: 360:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 439 base pairs
     TYPE: nucleic acid
     STRANDEDNESS: single
     TOPOLOGY: linear
    MOLECULE TYPE: DNA
US-09-042-353-360
                     85.2%; Score 357.8; DB 3;
 Query Match
                                            Length 439;
                     92.2%; Pred. No. 8.7e-104;
 Best Local Similarity
 Matches 377; Conservative
                          0; Mismatches
                                        32;
                                            Indels
                                                        Gaps
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         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTCTGGTTCCCAGGTTCCAGATG 71
Qу
           6 CATGGAGTTCCCCGTTCAGCTCCTGGGGCTCCTGCTGCTGTTTCCCAGGTGCCAGATG 65
Db
         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qy
            66 TGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGTCAC 125
Db
        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
           126 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 185
Db
        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qу
              186 AGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
        252 AAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 311
QУ
           246 AAGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCC 305
Db
        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qy
           306 TGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTTGGCCA 365
Db
        372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
           366 GGGGACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414
Db
```

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RESULT 8
US-08-758-417A-208
; Sequence 208, Application US/08758417A
  Patent No. 6300129
    GENERAL INFORMATION:
         APPLICANT: Lonberg, Nils
                    Kay, Robert M.
         TITLE OF INVENTION: Transgenic No. 6300129-Human Animals for
                             Producing Heterologous Antibodies
         NUMBER OF SEQUENCES: 417
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Townsend and Townsend and Crew LLP
              STREET: Two Embarcadero Center, Eighth Floor
              CITY: San Francisco
              STATE: California
              COUNTRY: USA
              ZIP: 94111-3834
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PatentIn Release #1.0, Version #1.30
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/08/758,417A
              FILING DATE: 02-Dec-1996
              CLASSIFICATION: <Unknown>
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US 08/728,463
              FILING DATE: 10-OCT-1996
              APPLICATION NUMBER: US 08/544,404
              FILING DATE: 10-OCT-1995
              APPLICATION NUMBER: US 08/352,322
              FILING DATE: 07-DEC-1994
              APPLICATION NUMBER: US 08/209,741
              FILING DATE: 09-MAR-1994
              APPLICATION NUMBER: US 08/165,699
              FILING DATE: 10-DEC-1993
              APPLICATION NUMBER: US 08/161,739
              FILING DATE: 03-DEC-1993
              APPLICATION NUMBER: US 08/155,301
              FILING DATE: 18-NOV-1993
              APPLICATION NUMBER: US 08/096,762
              FILING DATE: 22-JUL-1993
              APPLICATION NUMBER: US 08/053,131
              FILING DATE: 26-APR-1993
              APPLICATION NUMBER: US 07/990,860
              FILING DATE: 16-DEC-1992
         ATTORNEY/AGENT INFORMATION:
              NAME: Serafini, Andrew T.
              REGISTRATION NUMBER: 41,303
              REFERENCE/DOCKET NUMBER: 014643-009030US
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (415) 576-0200
              TELEFAX: (415) 576-0300
    INFORMATION FOR SEQ ID NO: 208:
```

SEQUENCE CHARACTERISTICS:

```
LENGTH: 439 base pairs
           TYPE: nucleic acid
           STRANDEDNESS: single
           TOPOLOGY: linear
       MOLECULE TYPE: DNA
       SEQUENCE DESCRIPTION: SEQ ID NO: 208:
US-08-758-417A-208
                     85.2%; Score 357.8; DB 3; Length 439;
 Query Match
                     92.2%; Pred. No. 8.7e-104;
 Best Local Similarity
                                                               0;
 Matches 377; Conservative
                          0; Mismatches
                                             Indels
                                                        Gaps
         12 CATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCCAGGTTCCAGATG 71
Qу
               6 CATGGAGTTCCCCGTTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCCAGATG 65
Db
         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
Qy
            66 TGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGTCAC 125
Db
        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
           126 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 185
Db
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Qy
              186 AGAGAAAGCCCCTAAGTCCCTGATCTATTCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
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Db
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Qу
           306 TGAAGATTTTGCAACTTATTACTGCCAACAGTATGATAGTTACCCGTACACTTTTGGCCA 365
Db
        372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qy
           366 GGGGACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414
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RESULT 9
US-09-472-087-62
 Sequence 62, Application US/09472087
 Patent No. 6682736
 GENERAL INFORMATION:
  APPLICANT: HANSON, DOUGLAS C.
  APPLICANT: NEVEU, MARK J.
  APPLICANT:
           MUELLER, EILLEN E.
  APPLICANT: HANKE, JEFFREY H.
  APPLICANT: GILMAN, STEVEN C.
  APPLICANT: DAVIS, C. GEOFFREY
  APPLICANT: CORVALAN, JOSE R.
  TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODIES TO CTLA-4
  FILE REFERENCE: ABX-PF1
  CURRENT APPLICATION NUMBER: US/09/472,087
  CURRENT FILING DATE: 1999-12-23
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PRIOR APPLICATION NUMBER: 60/113,647
  PRIOR FILING DATE: 1998-12-23
  NUMBER OF SEQ ID NOS: 147
  SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 62
   LENGTH: 714
   TYPE: DNA
   ORGANISM: Homo sapiens
US-09-472-087-62
 Query Match
                     79.1%; Score 332.2; DB 4;
                                             Length 714;
 Best Local Similarity
                     88.3%;
                           Pred. No. 1.4e-95;
 Matches 361; Conservative
                           0; Mismatches
                                         48:
                                             Indels
                                                        Gaps
                                                               0;
Qy
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           6 CATGAGGGTCCCGGCTCAGCTCCTGGGGCTCCTGCTACTCTGGCTCCGAGGTGCCAGATG 65
Db
         72 CGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCAC 131
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            66 TGACATCCAGATGACCCAGTCTCCATCCTCCTGTCTGCATCTGTAGGAGACAGAGTCAC 125
Db
        132 CATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACC 191
Qу
           126 CATCACTTGCCGGGCAAGTCAGAGCATTAACAGCTATTTAGATTGGTATCAGCAGAAACC 185
Db
        192 AGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATC 251
Qу
           186 AGGGAAAGCCCCTAAACTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCCATC 245
Db
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Qу
           Db
        246 AAGGTTCAGTGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGTCTGCAACC 305
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           11 | 11111 | 1
Db
        306 TGAAGATTTTGCAACTTACTGTCAACAGTATTACAGTACTCCATTCACTTTCGGCCC 365
        372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qy
            366 TGGGACCAAAGTGGAAATCAAACGAACTGTGGCTGCACCATCTGTCTTC 414
Db
RESULT 10
US-08-157-101A-4
 Sequence 4, Application US/08157101A
 Patent No. 5808032
  GENERAL INFORMATION:
    APPLICANT: KURIHARA, TATSUYA
    APPLICANT:
             MATSUKURA, SHIGEKAZU
             TSURUOKA, NOBUO
    APPLICANT:
    APPLICANT: ARIMA, KENJI
    APPLICANT: NISHIHARA, TATSURO
    TITLE OF INVENTION: ANTI-HBS ANTIBODY GENES AND EXPRESSION
   TITLE OF INVENTION: PLASMIDS THEREFOR
    NUMBER OF SEQUENCES:
    CORRESPONDENCE ADDRESS:
```

```
ADDRESSEE: PILLSBURY, MADISON & SUTRO
     STREET: 1100 NEW YORK AVENUE, N.W.
     CITY: WASHINGTON
     STATE: D.C.
     COUNTRY: USA
     ZIP: 20005
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
     COMPUTER: IBM PC compatible
     OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/157,101A
     FILING DATE: 05-APR-1994
     CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
     NAME: TITUS, MARLANA K
     REGISTRATION NUMBER: 35843
     REFERENCE/DOCKET NUMBER: 9437/204199
    TELECOMMUNICATION INFORMATION:
     TELEPHONE: 202-861-3711
     TELEFAX: 202-822-0944
     TELEX: 6714627 CUCH
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 1066 base pairs
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     STRANDEDNESS: single
     TOPOLOGY: linear
    MOLECULE TYPE: DNA (genomic)
US-08-157-101A-4
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RESULT 11
US-09-343-485A-3
; Sequence 3, Application US/09343485A
 Patent No. 6413777
 GENERAL INFORMATION:
  APPLICANT: REFF, MITCHELL R.
  APPLICANT: BARNETT, RICHARD S.
  APPLICANT: MCLACHLAN, KAREN R.
  TITLE OF INVENTION: NOVEL METHOD FOR INTEGRATING GENES AT SPECIFIC SITES IN
  TITLE OF INVENTION: MAMMALIAN CELLS VIA HOMOLOGOUS RECOMBINATION AND
                   VECTORS FOR ACCOMPLISHING THE SAME
  TITLE OF INVENTION:
  FILE REFERENCE: 037003-0275807
  CURRENT APPLICATION NUMBER: US/09/343,485A
  CURRENT FILING DATE: 1999-06-30
  PRIOR APPLICATION NUMBER: 09/023,715
  PRIOR FILING DATE: 1998-02-13
  PRIOR APPLICATION NUMBER: 08/819,866
  PRIOR FILING DATE: 1997-03-14
  NUMBER OF SEQ ID NOS: 3
  SOFTWARE: PatentIn Ver. 2.1
 SEO ID NO 3
   LENGTH: 19040
   TYPE: DNA
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic DNA
   OTHER INFORMATION: referred to as "Mandy"
US-09-343-485A-3
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RESULT 12
US-08-259-372A-13
; Sequence 13, Application US/08259372A
; Patent No. 5565354
  GENERAL INFORMATION:
    APPLICANT: Ostberg, Lars G.
    TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL
TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
    NUMBER OF SEQUENCES: 16
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend and Crew LLP
      STREET: Two Embarcadero Center, Eighth Floor
      CITY: San Francisco
      STATE: CA
      COUNTRY: USA
      ZIP: 94111-3834
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/259,372A
      FILING DATE: 14-JUN-1994
      CLASSIFICATION: 424
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/871,426
      FILING DATE: 21-APR-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/676,036
      FILING DATE: 27-MAR-1991
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/538,796
      FILING DATE: 15-JUN-1990
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/192,754
      FILING DATE: 11-MAY-1988
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 06/925,196
      FILING DATE: 31-OCT-1986
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 06/904,517
      FILING DATE: 05-SEP-1986
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ATTORNEY/AGENT INFORMATION:

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NAME: Smith, William M.
     REGISTRATION NUMBER: 30,223
     REFERENCE/DOCKET NUMBER: 11823-50-7
   TELECOMMUNICATION INFORMATION:
     TELEPHONE: (415) 326-2400
     TELEFAX: (415) 576-0300
  INFORMATION FOR SEQ ID NO: 13:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 384 base pairs
     TYPE: nucleic acid
     STRANDEDNESS: unknown
     TOPOLOGY: unknown
   MOLECULE TYPE: cDNA
   HYPOTHETICAL: NO
   ANTI-SENSE: NO
   ORIGINAL SOURCE:
     ORGANISM: Homo sapiens
     CELL TYPE: Hybridoma
     CELL LINE: ZM1-2
   FEATURE:
     NAME/KEY: CDS
     LOCATION:
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 Query Match
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 Best Local Similarity
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                          0; Mismatches
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                                            Indels
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US-08-468-671-13
; Sequence 13, Application US/08468671
 Patent No. 5648077
   GENERAL INFORMATION:
    APPLICANT: Ostberg, Lars G.
    TITLE OF INVENTION: PRODUCTION OF HUMAN MONOCLONAL
    TITLE OF INVENTION: ANTIBODIES SPECIFIC FOR HEPATITIS B SURFACE ANTIGEN
    NUMBER OF SEQUENCES:
                          16
    CORRESPONDENCE ADDRESS:
       ADDRESSEE: Townsend and Townsend and Crew LLP
       STREET: Two Embarcadero Center, Eighth Floor
      CITY: San Francisco
      STATE: CA
       COUNTRY: USA
       ZIP: 94111-3834
     COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/468,671
       FILING DATE: 06-JUN-1995
      CLASSIFICATION: 424
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 08/259,372
       FILING DATE: 14-JUN-1994
       APPLICATION NUMBER: US 07/871,426
       FILING DATE: 21-APR-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/676,036
       FILING DATE: 27-MAR-1991
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/538,796
       FILING DATE: 15-JUN-1990
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/192,754
       FILING DATE: 11-MAY-1988
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 06/925,196
       FILING DATE: 31-OCT-1986
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 06/904,517
       FILING DATE: 05-SEP-1986
     ATTORNEY/AGENT INFORMATION:
       NAME: Smith, William M.
       REGISTRATION NUMBER: 30,223
       REFERENCE/DOCKET NUMBER: 11823-50-7
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (415) 326-2400
       TELEFAX: (415) 576-0300
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 384 base pairs
       TYPE: nucleic acid
       STRANDEDNESS: unknown
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TOPOLOGY: unknown
    MOLECULE TYPE: cDNA
    HYPOTHETICAL:
                NO
    ANTI-SENSE:
    ORIGINAL SOURCE:
     ORGANISM: Homo sapiens
     CELL TYPE: Hybridoma
     CELL LINE:
               ZM1-2
    FEATURE:
     NAME/KEY:
              CDS
     LOCATION:
              1..384
US-08-468-671-13
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RESULT 14
US-08-646-367-2
 Sequence 2, Application US/08646367
 Patent No. 5959085
  GENERAL INFORMATION:
    APPLICANT: Pierre Garrone
    APPLICANT: Odile Djossou
    APPLICANT:
             Francois Fossiez
    APPLICANT:
             Jacques Banchereau
    TITLE OF INVENTION: Human Monoclonal Antibodies
    TITLE OF INVENTION: Against Human Cytokines And
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TITLE OF INVENTION: Methods Of Making And Using Such Antibodies
    NUMBER OF SEQUENCES: 30
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Schering-Plough Corporation
     STREET: 2000 Galloping Hill Road
     CITY: Kenilworth
     STATE: New Jersey
     COUNTRY: USA
     ZIP: 07033
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
     COMPUTER: Apple Macintosh
     OPERATING SYSTEM: Macintosh 7.5.3
     SOFTWARE: Microsoft Word 5.1a
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/646,367
     FILING DATE: May 16, 1996
     CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
     NAME: Foulke, Cynthia L.
     REGISTRATION NUMBER: 32,364
     REFERENCE/DOCKET NUMBER: SF0403K
    TELECOMMUNICATION INFORMATION:
     TELEPHONE: 908-298-2987
     TELEFAX: 908-298-5388
  INFORMATION FOR SEQ ID NO: 2:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 390 base pairs
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; Patent No. 5811524
  GENERAL INFORMATION:
    APPLICANT: BRAMS, Peter
    APPLICANT: CHAMAT, Soulaima Salim
    APPLICANT: PAN, Li-Zhen
    APPLICANT: WALSH, Edward E.
    APPLICANT: HEARD, Cheryl Janne
    APPLICANT: NEWMAN, Roland Anthony
    TITLE OF INVENTION: NEUTRALIZING HIGH AFFINITY HUMAN
    TITLE OF INVENTION: MONOCLONAL ANTIBODIES SPECIFIC TO RSV F-PROTEIN AND
    TITLE OF INVENTION: METHODS FOR THEIR MANUFACTURE AND THERAPEUTIC USE
    NUMBER OF SEQUENCES: 19
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Burns, Doane, Swecker & Mathis
      STREET: P.O. Box 1404
      CITY: Alexandria
      STATE: Virginia
      COUNTRY: United States
      ZIP: 22313-1404
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/488,376
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 424
    ATTORNEY/AGENT INFORMATION:
      NAME: Teskin, Robin L.
      REGISTRATION NUMBER: 35,030
      REFERENCE/DOCKET NUMBER: 012712-150
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (703) 836-6620
      TELEFAX: (703) 836-2021
  INFORMATION FOR SEQ ID NO: 16:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 705 base pairs
      TYPE: nucleic acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: DNA (genomic)
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NAME/KEY: CDS

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	3	365.8	87.1	728	9	US-09-844-684-15	Sequence 15, Appl
	4	365.8	87.1	728	14	US-10-040-244-15	Sequence 15, Appl
	5	365.8	87.1	728	17	US-10-693-629-65	Sequence 65, Appl
	6	362.6	86.3	716	9	US-09-844-684-13	Sequence 13, Appl
	7	362.6	86.3	716	14	US-10-040-244-13	Sequence 13, Appl
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ALIGNMENTS

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RESULT 1
US-09-859-053-29
; Sequence 29, Application US/09859053
  Patent No. US20020102658A1
  GENERAL INFORMATION:
  APPLICANT: Tsuji, Takashi
  APPLICANT: Tezuka, Katsunari
  APPLICANT: Hori, No. US20020102658Aluaki
   TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A
   TITLE OF INVENTION: COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND
                        PHARMACEUTICAL USE THEREOF
   TITLE OF INVENTION:
   FILE REFERENCE: 06501-079001
   CURRENT APPLICATION NUMBER: US/09/859,053
   CURRENT FILING DATE: 2001-05-16
   PRIOR APPLICATION NUMBER: JP 2001-99508
   PRIOR FILING DATE: 2001-03-30
   PRIOR APPLICATION NUMBER: JP 2000-147116
   PRIOR FILING DATE: 2000-05-18
   NUMBER OF SEQ ID NOS: 43
   SOFTWARE: FastSEQ for Windows Version 4.0
 SEQ ID NO 29
    LENGTH: 974
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   ORGANISM: Homo sapiens
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   LOCATION: (39)...(746)
   NAME/KEY: 3'UTR
   LOCATION: (750)...(974)
   NAME/KEY: sig peptide
   LOCATION: (39)...(104)
US-09-859-053-29
 Query Match
                     88.2%; Score 370.6; DB 9; Length 974;
 Best Local Similarity
                     94.1%; Pred. No. 2e-108;
                           0; Mismatches
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RESULT 2
US-10-625-105-29
 Sequence 29, Application US/10625105
 Publication No. US20040180052A1
 GENERAL INFORMATION:
  APPLICANT: Tsuji, Takashi
  APPLICANT: Tezuka, Katsunari
  APPLICANT: Hori, Nobuaki
  TITLE OF INVENTION: HUMAN MONOCLONAL ANTIBODY AGAINST A
  TITLE OF INVENTION: COSTIMULATORY SIGNAL TRANSDUCTION MOLECULE AILIM AND
  TITLE OF INVENTION: PHARMACEUTICAL USE THEREOF
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FILE REFERENCE: 06501-079001
  CURRENT APPLICATION NUMBER: US/10/625,105
  CURRENT FILING DATE: 2003-07-22
  PRIOR APPLICATION NUMBER: US/09/859,053
  PRIOR FILING DATE: 2001-05-16
  PRIOR APPLICATION NUMBER: JP 2001-99508
  PRIOR FILING DATE: 2001-03-30
  PRIOR APPLICATION NUMBER: JP 2000-147116
  PRIOR FILING DATE: 2000-05-18
  NUMBER OF SEQ ID NOS: 43
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEO ID NO 29
   LENGTH: 974
   TYPE: DNA
   ORGANISM: Homo sapiens
   FEATURE:
   NAME/KEY: 5'UTR
   LOCATION: (1)...(38)
   FEATURE:
   NAME/KEY: CDS
   LOCATION: (39)...(746)
   FEATURE:
   NAME/KEY: 3'UTR
   LOCATION: (750)...(974)
   FEATURE:
   NAME/KEY: sig peptide
   LOCATION: (39)...(104)
US-10-625-105-29
                     88.2%;
                            Score 370.6; DB 17; Length 974;
 Query Match
                            Pred. No. 2e-108;
 Best Local Similarity 94.1%;
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RESULT 3
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; Sequence 15, Application US/09844684
 Patent No. US20020142358A1
 GENERAL INFORMATION:
  APPLICANT: GEMINI SCIENCE, INC.
  APPLICANT: LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY
  TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME
  FILE REFERENCE: 21286/0276339
  CURRENT APPLICATION NUMBER: US/09/844,684
  CURRENT FILING DATE: 2001-04-27
  PRIOR APPLICATION NUMBER: US 60/200,601
  PRIOR FILING DATE: 2000-04-28
  NUMBER OF SEQ ID NOS: 15
  SOFTWARE: PatentIn Ver. 2.1
 SEO ID NO 15
   LENGTH: 728
   TYPE: DNA
   ORGANISM: Homo sapiens
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RESULT 4
US-10-040-244-15
; Sequence 15, Application US/10040244
 Publication No. US20030059427A1
 GENERAL INFORMATION:
  APPLICANT: KIRIN BEER KABUSHIKI KAISHA
  APPLICANT: FORCE, WALKER F.
  APPLICANT: TAKAHASHI, NOBUAKI
  APPLICANT: MIKAYAMA, TOSHIFUMI
  TITLE OF INVENTION: ISOLATION AND CHARACTERIZATION OF HIGHLY ACTIVE ANTI-CD40
ANTIBODY
  FILE REFERENCE: 021286/0272501
  CURRENT APPLICATION NUMBER: US/10/040,244
  CURRENT FILING DATE: 2002-06-17
  PRIOR APPLICATION NUMBER: 60/200,601
  PRIOR FILING DATE: 2000-4-28
  PRIOR APPLICATION NUMBER: PCT/US01/13672
  PRIOR FILING DATE: 2001-04-27
  PRIOR APPLICATION NUMBER: 09/844,684
  PRIOR FILING DATE: 2001-04-27
  NUMBER OF SEQ ID NOS: 17
  SOFTWARE: PatentIn Ver. 3.0
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RESULT 5
US-10-693-629-65
; Sequence 65, Application US/10693629
  Publication No. US20040120948A1
; GENERAL INFORMATION:
  APPLICANT: KIRIN BEER KABUSHIKI KAISHA
  APPLICANT: MIKAYAMA, Toshifumi
  APPLICANT: YOSHIDA, Hitoshi
  APPLICANT: FORCE, Walker, R.
  APPLICANT: CHEN, Xingjie
  APPLICANT:
             TAKAHASHI, Nobuaki
  TITLE OF INVENTION: ANTI CD40 MONOCLONAL ANTIBODY
  FILE REFERENCE: 021286-0306473
  CURRENT APPLICATION NUMBER: US/10/693,629
  CURRENT FILING DATE: 2003-11-13
  PRIOR APPLICATION NUMBER: PCT/US01/13672
  PRIOR FILING DATE: 2001-04-27
  PRIOR APPLICATION NUMBER: US09/844,684
  PRIOR FILING DATE: 2001-04-27
  PRIOR APPLICATION NUMBER: JP2001/142482
  PRIOR FILING DATE: 2001-05-11
  PRIOR APPLICATION NUMBER: JP2001/310535
  PRIOR FILING DATE: 2001-10-05
  PRIOR APPLICATION NUMBER: US10/040,244
  PRIOR FILING DATE: 2001-10-26
  NUMBER OF SEQ ID NOS: 66
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 Best Local Similarity 93.4%;
                              Pred. No. 6.4e-107;
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            Db
         184 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACC 243
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           364 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACATTCGGCCA 423
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            424 AGGGACCAAGGTGGAGATCAAACGTACGGTGGCTGCACCATCTGTCTTC 472
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RESULT 6
US-09-844-684-13
; Sequence 13, Application US/09844684
 Patent No. US20020142358A1
 GENERAL INFORMATION:
  APPLICANT: GEMINI SCIENCE, INC.
  APPLICANT: LA JOLLA INSTITUTE FOR ALLERGY AND IMMUNOLOGY
  TITLE OF INVENTION: HUMAN ANTI-CD40 ANTIBODIES AND METHODS OF MAKING SAME
  FILE REFERENCE: 21286/0276339
  CURRENT APPLICATION NUMBER: US/09/844,684
  CURRENT FILING DATE: 2001-04-27
  PRIOR APPLICATION NUMBER: US 60/200,601
  PRIOR FILING DATE: 2000-04-28
  NUMBER OF SEQ ID NOS: 15
  SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 13
   LENGTH: 716
   TYPE: DNA
   ORGANISM: Homo sapiens
US = 09 - 844 - 684 - 13
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                     86.3%;
                            Score 362.6; DB 9;
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                           Pred. No. 6.8e-106;
 Best Local Similarity
                     92.9%;
 Matches 380; Conservative
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           172 CATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAACAGAAACC 231
Db
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           232 AGGGAAAGCCCCTAAGCTCCTGATCTATGCTGGATCCAGTTTGCAAAGTGGGGTCCCATC 291
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        372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
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            412 AGGGACCAAGGTGGAGATCAAACGTACGGTGGCTGCACCATCTGTCTTC 460
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RESULT 7
US-10-040-244-13
; Sequence 13, Application US/10040244
; Publication No. US20030059427A1
 GENERAL INFORMATION:
  APPLICANT: KIRIN BEER KABUSHIKI KAISHA
  APPLICANT: FORCE, WALKER F.
  APPLICANT: TAKAHASHI, NOBUAKI
  APPLICANT: MIKAYAMA, TOSHIFUMI
  TITLE OF INVENTION: ISOLATION AND CHARACTERIZATION OF HIGHLY ACTIVE ANTI-CD40
ANTIBODY
  FILE REFERENCE: 021286/0272501
  CURRENT APPLICATION NUMBER: US/10/040,244
  CURRENT FILING DATE: 2002-06-17
  PRIOR APPLICATION NUMBER: 60/200,601
  PRIOR FILING DATE: 2000-4-28
  PRIOR APPLICATION NUMBER: PCT/US01/13672
  PRIOR FILING DATE: 2001-04-27
  PRIOR APPLICATION NUMBER: 09/844,684
  PRIOR FILING DATE: 2001-04-27
  NUMBER OF SEQ ID NOS: 17
  SOFTWARE: PatentIn Ver. 3.0
 SEO ID NO 13
   LENGTH: 716
   TYPE: DNA
   ORGANISM: Homo sapiens
US-10-040-244-13
 Query Match
                      86.3%; Score 362.6; DB 14; Length 716;
 Best Local Similarity 92.9%; Pred. No. 6.8e-106;
 Matches 380: Conservative
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Qy
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Qy
           292 AAGGTTCAGCGGCAGTGGATTTGGGACAGATTTCACTCTCACCATCGGCAGCCTGCAGCC 351
Db
        312 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCA 371
Qу
           352 TGAAGATTTTGCAACTTACTATTGTCAACAGGCTAGCAGTTTCCCTCGGACGTTCGGCCA 411
Db
        372 GGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
            Db
        412 AGGGACCAAGGTGGAGATCAAACGTACGGTGGCTGCACCATCTGTCTTC 460
RESULT 8
US-10-292-088-23
; Sequence 23, Application US/10292088
 Publication No. US20030211100A1
 GENERAL INFORMATION:
  APPLICANT: BEDIAN, VAHE
  APPLICANT: GLADUE, RONALD P.
  APPLICANT: CORVALAN, JOSE
  APPLICANT: JIA, XIAO-CHI
  APPLICANT: FENG, XIAO
  TITLE OF INVENTION: ANTIBODIES TO CD40
  FILE REFERENCE: ABX-PF/3 US
  CURRENT APPLICATION NUMBER: US/10/292,088
  CURRENT FILING DATE: 2003-03-14
  PRIOR APPLICATION NUMBER: 60/348,980
  PRIOR FILING DATE: 2001-11-09
  NUMBER OF SEQ ID NOS: 147
  SOFTWARE: PatentIn Ver. 2.1
 SEQ ID NO 23
   LENGTH: 705
   TYPE: DNA
   ORGANISM: Homo sapiens
US-10-292-088-23
 Query Match
                     86.1%; Score 361.6; DB 15; Length 705;
 Best Local Similarity 92.9%; Pred. No. 1.4e-105;
 Matches 379: Conservative
                         0; Mismatches
                                        29:
                                            Indels
                                                        Gaps
                                                              0:
Qу
         13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCAGGTTCCCAGGTTCCAGATGC 72
           Db
         1 ATGAGGCTCCCTGCTCAGCTCCTGGGGCTCCTGCTCTGGTTCCCAGGTTCCAGATGC 60
         73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
Qy
           61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120
Db
        133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
Qу
           121 ATCACTTGTCGGGCGAGTCAGCCTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180
Db
        193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
Qy
```

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Db
        181 GGGAAAGCCCCTAAACTCCTGATTTATTCTGCCTCCGGTTTGCAAAGTGGGGTCCCATCA 240
Qу
        253 AGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
           241 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300
Db
        313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
Qу
           301 GAAGATTTTGCAACTTACTATTGTCAACAGACTGACAGTTTCCCGCTCACTTTCGGCGGC 360
Db
        373 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
           361 GGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 408
Db
RESULT 9
US-10-292-088-47
; Sequence 47, Application US/10292088
; Publication No. US20030211100A1
; GENERAL INFORMATION:
  APPLICANT: BEDIAN, VAHE
  APPLICANT: GLADUE, RONALD P.
  APPLICANT: CORVALAN, JOSE
  APPLICANT: JIA, XIAO-CHI
  APPLICANT: FENG, XIAO
  TITLE OF INVENTION: ANTIBODIES TO CD40
  FILE REFERENCE: ABX-PF/3 US
  CURRENT APPLICATION NUMBER: US/10/292,088
  CURRENT FILING DATE: 2003-03-14
  PRIOR APPLICATION NUMBER: 60/348,980
  PRIOR FILING DATE: 2001-11-09
  NUMBER OF SEQ ID NOS: 147
  SOFTWARE: PatentIn Ver. 2.1
 SEO ID NO 47
   LENGTH: 705
   TYPE: DNA
   ORGANISM: Homo sapiens
US-10-292-088-47
 Query Match
                     86.1%; Score 361.6; DB 15; Length 705;
 Best Local Similarity 92.9%; Pred. No. 1.4e-105;
 Matches 379: Conservative
                        0: Mismatches
                                        29: Indels
                                                       Gaps
                                                              0:
        13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCCAGGTTCCCAGGTGC 72
Qу
           1 ATGAGGCTCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCCCAGGTTCCAGATGC 60
Db
        73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
Qу
           61 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 120
Db
        133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
Qу
           121 ATCACTTGTCGGGCGAGTCAGGGTATTTACAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180
Db
        193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
Qу
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181 GGGAAAGCCCCTAACCTCCTGATCTATACTGCATCCACTTTACAAAGTGGGGTCCCATCA 240
Db
        253 AGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
Qу
            241 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAACCT 300
Db
        313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
Qу
            301 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAACATTTTCCCGCTCACTTTCGGCGGA 360
Db
        373 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
           361 GGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 408
Db
RESULT 10
US-10-684-109-83
; Sequence 83, Application US/10684109
 Publication No. US20040175379A1
 GENERAL INFORMATION:
  APPLICANT: DeVries, Peter J.
  APPLICANT: Green, Larry L.
  APPLICANT: Ostrow, David H.
  APPLICANT: Reilly, Edward B.
  APPLICANT: Wieler, James
  TITLE OF INVENTION: Erythropoietin Receptor Binding
  TITLE OF INVENTION: Antibodies
  FILE REFERENCE: 6989.US.O2
  CURRENT APPLICATION NUMBER: US/10/684,109
  CURRENT FILING DATE: 2003-10-10
  PRIOR APPLICATION NUMBER: 10/269,711
  PRIOR FILING DATE: 2002-10-14
  NUMBER OF SEQ ID NOS: 115
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEO ID NO 83
   LENGTH: 752
   TYPE: DNA
   ORGANISM: Homo sapiens
US-10-684-109-83
 Query Match
                     86.1%; Score 361.6; DB 17; Length 752;
 Best Local Similarity
                     92.9%:
                           Pred. No. 1.4e-105;
 Matches 379; Conservative
                          0; Mismatches 29; Indels
                                                     0; Gaps
                                                              0;
         13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCCAGGTTCCCAGATGC 72
Qу
           1 ATGAGGGTCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCCTGGTTCCCAGGTTCCAGATGC 60
Db
Qy.
         73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
           Dh
        61 GACATCCAGATGACCCAATCTCCATCTTCCGTGTCTGCATCTATAGGAGACAGAGTCTCC 120
        133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
Qу
           Db
        121 ATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 180
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193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
Qу
           181 GGGAAAGCCCCTACGCTCCTTATCTATGCTGCATCCACTTTGCAACGTGGGGTCCCATCA 240
Db
        253 AGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
Qу
           241 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 300
Db
        313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
Qу
           301 GAAGATTTTGCAACTTACTTTTGTCAACAGGCTAACAGTTTCCCATTCACTTTCGGCCCT 360
Db
        373 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qy
           Db
        361 GGGACCAAAGTGGATATCAAACGAACTGTGGCTGCACCATCTGTCTTC 408
RESULT 11
US-10-684-109-84/c
 Sequence 84, Application US/10684109
 Publication No. US20040175379A1
 GENERAL INFORMATION:
  APPLICANT: DeVries, Peter J.
  APPLICANT: Green, Larry L.
  APPLICANT: Ostrow, David H.
  APPLICANT: Reilly, Edward B.
  APPLICANT: Wieler, James
  TITLE OF INVENTION: Erythropoietin Receptor Binding
  TITLE OF INVENTION: Antibodies
  FILE REFERENCE: 6989.US.O2
  CURRENT APPLICATION NUMBER: US/10/684,109
  CURRENT FILING DATE: 2003-10-10
  PRIOR APPLICATION NUMBER: 10/269,711
  PRIOR FILING DATE: 2002-10-14
  NUMBER OF SEQ ID NOS: 115
  SOFTWARE: FastSEQ for Windows Version 4.0
 SEQ ID NO 84
   LENGTH: 752
   TYPE: DNA
   ORGANISM: Homo sapiens
US-10-684-109-84
 Query Match
                     86.1%; Score 361.6; DB 17;
                                            Length 752;
 Best Local Similarity
                     92.9%;
                           Pred. No. 1.4e-105;
 Matches 379; Conservative
                           0: Mismatches
                                        29:
                                             Indels
                                                        Gaps
                                                               0;
         13 ATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCCCAGGTTCCCAGATGC 72
Qу
           Db
        752 ATGAGGTCCCCGCTCAGCTCCTGGGGCTCCTGCTGCTCCTGGTTCCCAGGTTCCAGATGC 693
         73 GACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGTCACC 132
Qу
           Db
        692 GACATCCAGATGACCCAATCTCCATCTTCCGTGTCTGCATCTATAGGAGACAGAGTCTCC 633
        133 ATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAAACCA 192
Qу
           Db
        632 ATCACTTGTCGGGCGAGTCAGGGTATTAGCAGCTGGTTAGCCTGGTATCAGCAGAAACCA 573
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QУ
         193 GGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCCATCA 252
             572 GGGAAAGCCCCTACGCTCCTTATCTATGCTGCATCCACTTTGCAACGTGGGGTCCCATCA 513
Db
         253 AGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 312
QУ
             512 AGGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCAGCCT 453
Db
         313 GAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGGTCAG 372
Qу
             452 GAAGATTTTGCAACTTACTTTTGTCAACAGGCTAACAGTTTCCCATTCACTTTCGGCCCT 393
Dh
Qу
         373 GGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
             Dh
         392 GGGACCAAAGTGGATATCAAACGAACTGTGGCTGCACCATCTGTCTTC 345
RESULT 12
US-10-395-894-24
; Sequence 24, Application US/10395894
; Publication No. US20040033229A1
; GENERAL INFORMATION:
  APPLICANT: MADDON, Paul J.
  APPLICANT: DONOVAN, Gerald P.
  APPLICANT: OLSON, William C.
  APPLICANT: SCHsLKE, No. US20040033229A1bert
  APPLICANT: GARDNER, Jason
  APPLICANT: MA, Dangshe
  TITLE OF INVENTION: PSMA ANTIBODIES AND PROTEIN MULTIMERS
  FILE REFERENCE: P00741.70005.US
  CURRENT APPLICATION NUMBER: US/10/395,894
  CURRENT FILING DATE: 2003-03-24
  PRIOR APPLICATION NUMBER: PCT/US02/33944
  PRIOR FILING DATE: 2002-10-23
  PRIOR APPLICATION NUMBER: US 60/335,215
  PRIOR FILING DATE: 2001-10-23
  PRIOR APPLICATION NUMBER: US 60/362,747
  PRIOR FILING DATE: 2002-03-07
  PRIOR APPLICATION NUMBER: US 60/412,618
  PRIOR FILING DATE: 2002-09-20
  NUMBER OF SEQ ID NOS: 33
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 24
   LENGTH: 463
   TYPE: DNA
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Includes BamHI/Bg1II cloning junction, signal peptide, V
region, portion
   OTHER INFORMATION: of C region and 3'XbaI/NheI (heavy) or NheI (light)
cloning junction
US-10-395-894-24
 Query Match
                       82.5%; Score 346.4; DB 16; Length 463;
 Best Local Similarity
                      90.0%; Pred. No. 9.5e-101;
 Matches 371; Conservative 0; Mismatches 41;
                                                Indels
                                                             Gaps
                                                                    0;
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Qу	9	CACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAG 68
•		
Db	7	CACCATGAGGGTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCCAG 66
Qy	69	ATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGT 128
Db	67	ATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGT 126
Qу	129	CACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAA 188
Db	127	CACCATCACTTGTCGGGCGAGTCAGGGCATTAGCCATTATTTAGCCTGGTTTCAGCAGAA 186
Qу	189	ACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCC 248
Db	187	ACCAGGGAAAGCCCCTAAGTCCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCC 246
_		
QУ	249	ATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA 308
ra l		
Db .	247	ATCAAAGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTACA 306
0	200	
QУ	309	GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGG 368
Db	207	
DD	307	GCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATAATAGTTTCCCGCTCACTTTCGG 366
Qy	369	TCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qy	309	
Db	367	CGGAGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 418
	507	COURSES AND TOWNS TOWNS CONTROL OF THE COURSE OF THE COURS

RESULT 13

US-10-695-667-24

- ; Sequence 24, Application US/10695667
- ; Publication No. US20040161776A1
- ; GENERAL INFORMATION:
- ; APPLICANT: MADDON, Paul J.
- ; APPLICANT: DONOVAN, Gerald P.
- ; APPLICANT: OLSON, William C.
- ; APPLICANT: SCHSLKE, Norbert
- ; APPLICANT: GARDNER, Jason
- ; APPLICANT: MA, Dangshe
- ; TITLE OF INVENTION: PSMA FORMULATIONS AND USES THEREOF
- FILE REFERENCE: P0741.70006US00
- ; CURRENT APPLICATION NUMBER: US/10/695,667
- CURRENT FILING DATE: 2003-10-27
- ; PRIOR APPLICATION NUMBER: US 10/395,894
- PRIOR FILING DATE: 2003-03-21
- ; PRIOR APPLICATION NUMBER: PCT/US02/33944
- ; PRIOR FILING DATE: 2002-10-23
- ; PRIOR APPLICATION NUMBER: US 60/335,215
- ; PRIOR FILING DATE: 2001-10-23
- ; PRIOR APPLICATION NUMBER: US 60/362,747
- ; PRIOR FILING DATE: 2002-03-07
- ; PRIOR APPLICATION NUMBER: US 60/412,618
- ; PRIOR FILING DATE: 2002-09-20
- ; NUMBER OF SEQ ID NOS: 33
- ; SOFTWARE: PatentIn version 3.1

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; SEQ ID NO 24
   LENGTH: 463
   TYPE: DNA
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: Includes BamHI/Bg1II cloning junction, signal peptide, V
region, portion
   OTHER INFORMATION: of C region and 3'XbaI/NheI (heavy) or NheI (light)
cloning junction
US-10-695-667-24
 Query Match
                     82.5%; Score 346.4; DB 17; Length 463;
 Best Local Similarity
                     90.0%; Pred. No. 9.5e-101;
 Matches 371; Conservative
                           0; Mismatches
                                         41;
                                             Indels
Qy
          9 CACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTCTGGTTCCCAGGTTCCAG 68
            Db
          7 CACCATGAGGGTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTGTTTCCCAGGTGCCAG 66
         69 ATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGT 128
Qу
           Db
         67 ATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGT 126
        129 CACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAA 188
QУ
           127 CACCATCACTTGTCGGCCAGTCAGGGCATTAGCCATTATTTAGCCTGGTTTCAGCAGAA 186
Db
Qу
        189 ACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCC 248
           187 ACCAGGGAAAGCCCCTAAGTCCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCC 246
Db
        249 ATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA 308
Qу
           Db
        247 ATCAAAGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTACA 306
        309 GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGG 368
Qу
           Db
        307 GCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATAATAGTTTCCCGCTCACTTTCGG 366
        369 TCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
Qу
               Db
        367 CGGAGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 418
RESULT 14
US-10-395-894-10
; Sequence 10, Application US/10395894
Publication No. US20040033229A1
 GENERAL INFORMATION:
  APPLICANT: MADDON, Paul J.
  APPLICANT: DONOVAN, Gerald P.
  APPLICANT: OLSON, William C.
  APPLICANT: SCHsLKE, No. US20040033229A1bert
  APPLICANT: GARDNER, Jason
  APPLICANT:
            MA, Dangshe
  TITLE OF INVENTION: PSMA ANTIBODIES AND PROTEIN MULTIMERS
  FILE REFERENCE: P00741.70005.US
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CURRENT APPLICATION NUMBER: US/10/395,894
  CURRENT FILING DATE: 2003-03-24
  PRIOR APPLICATION NUMBER: PCT/US02/33944
  PRIOR FILING DATE: 2002-10-23
  PRIOR APPLICATION NUMBER: US 60/335,215
  PRIOR FILING DATE: 2001-10-23
  PRIOR APPLICATION NUMBER: US 60/362,747
  PRIOR FILING DATE: 2002-03-07
  PRIOR APPLICATION NUMBER: US 60/412,618
  PRIOR FILING DATE: 2002-09-20
  NUMBER OF SEQ ID NOS: 33
  SOFTWARE: PatentIn version 3.1
 SEQ ID NO 10
   LENGTH: 6082
   TYPE: DNA
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Plasmid
US-10-395-894-10
 Query Match
                     82.5%;
                            Score 346.4; DB 16; Length 6082;
 Best Local Similarity
                    90.0%; Pred. No. 2e-100;
 Matches 371; Conservative
                           0; Mismatches
                                         41;
                                             Indels
                                                     0;
                                                        Gaps
                                                               0:
          9 CACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTGCTCTGGTTCCCAGGTTCCAG 68
Qу
            913 CACCATGAGGGTCCCTGCTCAGCTCCTGGGGGCTCCTGCTGCTGCTGTTTCCCAGGTGCCAG 972
Db
         69 ATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGT 128
Qу
           Db
        973 ATGTGACATCCAGATGACCCAGTCTCCATCTCACTGTCTGCATCTGTAGGAGACAGAGT 1032
        129 CACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAA 188
Qy
           Db
       1033 CACCATCACTTGTCGGGCGAGTCAGGGCATTAGCCATTATTTAGCCTGGTTTCAGCAGAA 1092
Qу
        189 ACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCC 248
           Db
       1093 ACCAGGGAAAGCCCCTAAGTCCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCC 1152
        249 ATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA 308
Qy
           Db
       1153 ATCAAAGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTACA 1212
        309 GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGG 368
Qy
           1213 GCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATAATAGTTTCCCGCTCACTTTCGG 1272
Db
Qу
        369 TCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420
               Db
       1273 CGGAGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 1324
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RESULT 15

US-10-695-667-10

[;] Sequence 10, Application US/10695667

[;] Publication No. US20040161776A1

```
GENERAL INFORMATION:
  APPLICANT: MADDON, Paul J.
  APPLICANT: DONOVAN, Gerald P.
  APPLICANT: OLSON, William C.
  APPLICANT: SCHSLKE, Norbert
  APPLICANT: GARDNER, Jason
  APPLICANT: MA, Dangshe
  TITLE OF INVENTION: PSMA FORMULATIONS AND USES THEREOF
  FILE REFERENCE: P0741.70006US00
  CURRENT APPLICATION NUMBER: US/10/695,667
  CURRENT FILING DATE: 2003-10-27
  PRIOR APPLICATION NUMBER: US 10/395,894
  PRIOR FILING DATE: 2003-03-21
  PRIOR APPLICATION NUMBER: PCT/US02/33944
  PRIOR FILING DATE: 2002-10-23
  PRIOR APPLICATION NUMBER: US 60/335,215
  PRIOR FILING DATE: 2001-10-23
  PRIOR APPLICATION NUMBER: US 60/362,747
  PRIOR FILING DATE: 2002-03-07
  PRIOR APPLICATION NUMBER: US 60/412,618
  PRIOR FILING DATE: 2002-09-20
  NUMBER OF SEQ ID NOS: 33
  SOFTWARE: PatentIn version 3.1
 SEO ID NO 10
   LENGTH: 6082
   TYPE: DNA
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: Plasmid
US-10-695-667-10
 Query Match
                     82.5%;
                            Score 346.4; DB 17; Length 6082;
 Best Local Similarity 90.0%; Pred. No. 2e-100;
 Matches 371; Conservative
                           0; Mismatches
                                         41; Indels
                                                      0; Gaps
                                                                0;
Qy
          9 CACCATGATGGTCCCAGCTCAGCTCCTCGGTCTCCTGCTCCTGGTTCCCAGGTTCCAG 68
            Db
        913 CACCATGAGGGTCCCTGCTCAGCTCCTGGGGCTCCTGCTGCTCTGTTTCCCAGGTGCCAG 972
         69 ATGCGACATCCAGATGACCCAGTCTCCATCTTCCGTGTCTGCATCTGTAGGAGACAGAGT 128
Qу
            Db
        973 ATGTGACATCCAGATGACCCAGTCTCCATCCTCACTGTCTGCATCTGTAGGAGACAGAGT 1032
Qу
        129 CACCATCACTTGTCGGGCGAGTCAGGATATTAGCAGCTGGTTAGCCTGGTATCAGCATAA 188
            1033 CACCATCACTTGTCGGGCGAGTCAGGGCATTAGCCATTATTTAGCCTGGTTTCAGCAGAA 1092
Db
        189 ACCAGGTAAAGCACCTAAGCTCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGTGTCCC 248
Qу
           1093 ACCAGGGAAAGCCCCTAAGTCCCTGATCTATGCTGCATCCAGTTTGCAAAGTGGGGTCCC 1152
Db
        249 ATCAAGGTTCAGCGGAAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTGCA 308
Qу
           1153 ATCAAAGTTCAGCGGCAGTGGATCTGGGACAGATTTCACTCTCACCATCAGCAGCCTACA 1212
Db
        309 GCCTGAAGATTTTGCAACTTACTATTGTCAACAGGCTAATAGTTTCCCGTACACTTTTGG 368
Qy
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Db 1213 GCCTGAAGATTTTGCAACTTATTACTGCCAACAGTATAATAGTTTCCCGCTCACTTTCGG 1272

Qy 369 TCAGGGAACCAAGCTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 420

1273 CGGAGGGACCAAGGTGGAGATCAAACGAACTGTGGCTGCACCATCTGTCTTC 1324

Search completed: December 3, 2004, 02:43:24

Job time : 323.011 secs

Db

GenCore version 5.1.6

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OM nucleic - nucleic search, using sw model

Run on: December 2, 2004, 12:19:03; Search time 2186.2 Seconds

(without alignments)

7000.593 Million cell updates/sec

Title: US-08-728-463B-220

Perfect score: 420

Sequence: 1 AAGCTTGCCACCATGATGGT.....TGGCTGCACCATCTGTCTTC 420

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 32822875 seqs, 18219865908 residues

Total number of hits satisfying chosen parameters: 65645750

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : EST:*

1: gb est1:*

2: gb est2:*

3: gb htc:*

4: gb est3:*

5: gb est4:*

6: gb_est5:*

7: gb_est6:*

8: gb gss1:*

9: gb_gss2:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

ą

Result Query

No. Score Match Length DB ID

Description

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ALIGNMENTS

RESULT 1 BF976230

943 bp mRNA linear EST 22-JAN-2001 LOCUS BF976230 DEFINITION 602245105F1 NIH_MGC_48 Homo sapiens cDNA clone IMAGE:4336225 5',

mRNA sequence.

ACCESSION BF976230

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           Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
              (bases 1 to 943)
REFERENCE
           NIH-MGC http://mqc.nci.nih.gov/.
 AUTHORS
           National Institutes of Health, Mammalian Gene Collection (MGC)
 TITLE
           Unpublished (1999)
 JOURNAL
           Contact: Robert Strausberg, Ph.D.
COMMENT
           Email: cgapbs-r@mail.nih.gov
           Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
            cDNA Library Preparation: Ling Hong/Rubin Laboratory
            cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
           DNA Sequencing by: Incyte Genomics, Inc.
            Clone distribution: MGC clone distribution information can be
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                   Directionally cloned into EcoRI/XhoI sites using the
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                   for average insert size 1.8kb. Library constructed by Ling
                   Hong in the laboratory of Gerald M. Rubin (University of
                   California, Berkeley) using ZAP-cDNA synthesis kit
                   (Stratagene) and Superscript II RT (Life Technologies).
                   Note: this is a NIH MGC Library."
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BF976230.1 GI:12343445

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REFERENCE
              (bases 1 to 1100)
           NIH-MGC http://mgc.nci.nih.gov/.
 AUTHORS
           National Institutes of Health, Mammalian Gene Collection (MGC)
 TITLE
           Unpublished (1999)
  JOURNAL
COMMENT
           Contact: Robert Strausberg, Ph.D.
           Email: cgapbs-r@mail.nih.gov
           Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
            cDNA Library Preparation: Ling Hong/Rubin Laboratory
            cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
            DNA Sequencing by: Incyte Genomics, Inc.
            Clone distribution: MGC clone distribution information can be
           found through the I.M.A.G.E. Consortium/LLNL at:
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                   Directionally cloned into EcoRI/XhoI sites using the
                   following 5' adaptor: GGCACGAG(G). Size-selected >500bp
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for average insert size 1.8kb. Library constructed by Ling Hong in the laboratory of Gerald M. Rubin (University of California, Berkeley) using ZAP-cDNA synthesis kit (Stratagene) and Superscript II RT (Life Technologies). Note: this is a NIH MGC Library."

ORIGIN

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REFERENCE
            (bases 1 to 606)
 AUTHORS
          Liu, X.-Q., Zhou, Y., Zhang, L.-J., Xu, H., Chen, H.-K., Pan, Z.-G. and
          Zenq,Y.-X.
 TITLE
          Transcriptional Gene Expression Profile of Human Nasopharynx
 JOURNAL
          Unpublished (2003)
COMMENT
          Contact: YiXin Zenq
```

```
Sun Yat-sen University
          651 DongFeng Road East, GuangZhou 510060, China
          Tel: 86-1380-9770-743
          Fax: 86-20-8775-4506
          Email: yxzeng@gzsums.edu.cn.
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Cancer Center

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REFERENCE
              (bases 1 to 755)
           NIH-MGC http://mgc.nci.nih.gov/.
  AUTHORS
  TITLE
           National Institutes of Health, Mammalian Gene Collection (MGC)
  JOURNAL
           Unpublished (1999)
           Contact: Robert Strausberg, Ph.D.
COMMENT
           Email: cgapbs-r@mail.nih.gov
           Tissue Procurement: CLONTECH Laboratories, Inc.
            cDNA Library Preparation: CLONTECH Laboratories, Inc.
            cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
            DNA Sequencing by: Incyte Genomics, Inc.
            Clone distribution: MGC clone distribution information can be
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                   C, or G and N = A, C, G, or T). Average insert size 1.9
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REFERENCE
          1 (bases 1 to 472)
 AUTHORS
          Liu, X.-Q., Zhou, Y., Zhang, L.-J., Xu, H., Chen, H.-K., Pan, Z.-G. and
          Zeng, Y.-X.
 TITLE
          Transcriptional Gene Expression Profile of Human Nasopharynx
 JOURNAL
          Unpublished (2003)
COMMENT
          Contact: YiXin Zeng
          Cancer Center
          Sun Yat-sen University
          651 DongFeng Road East, GuangZhou 510060, China
          Tel: 86-1380-9770-743
          Fax: 86-20-8775-4506
          Email: yxzeng@qzsums.edu.cn.
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          Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE
             (bases 1 to 497)
 AUTHORS
          Liu, X.-Q., Zhou, Y., Zhang, L.-J., Xu, H., Chen, H.-K., Pan, Z.-G. and
          Zeng, Y.-X.
 TITLE
          Transcriptional Gene Expression Profile of Human Nasopharynx
 JOURNAL
          Unpublished (2003)
COMMENT
          Contact: YiXin Zenq
          Cancer Center
          Sun Yat-sen University
          651 DongFeng Road East, GuangZhou 510060, China
          Tel: 86-1380-9770-743
          Fax: 86-20-8775-4506
          Email: yxzeng@qzsums.edu.cn.
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VERSION
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REFERENCE
            (bases 1 to 558)
 AUTHORS
          Liu, X.-Q., Zhou, Y., Zhang, L.-J., Xu, H., Chen, H.-K., Pan, Z.-G. and
          Zenq, Y.-X.
          Transcriptional Gene Expression Profile of Human Nasopharynx
 TITLE
 JOURNAL
         Unpublished (2003)
COMMENT
          Contact: YiXin Zeng
          Cancer Center
         Sun Yat-sen University
          651 DongFeng Road East, GuangZhou 510060, China
         Tel: 86-1380-9770-743
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Email: yxzeng@gzsums.edu.cn.
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Fax: 86-20-8775-4506

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REFERENCE
          1 (bases 1 to 605)
         Liu, X.-Q., Zhou, Y., Zhanq, L.-J., Xu, H., Chen, H.-K., Pan, Z.-G. and
 AUTHORS
          Zeng, Y.-X.
         Transcriptional Gene Expression Profile of Human Nasopharynx
 TITLE
         Unpublished (2003)
 JOURNAL
         Contact: YiXin Zeng
COMMENT
          Cancer Center
          Sun Yat-sen University
          651 DongFeng Road East, GuangZhou 510060, China
          Tel: 86-1380-9770-743
          Fax: 86-20-8775-4506
          Email: yxzeng@qzsums.edu.cn.
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              (bases 1 to 851)
REFERENCE
           NIH-MGC http://mgc.nci.nih.gov/.
  AUTHORS
           National Institutes of Health, Mammalian Gene Collection (MGC)
  TITLE
  JOURNAL
           Unpublished (1999)
           Contact: Robert Strausberg, Ph.D.
COMMENT
           Email: cgapbs-r@mail.nih.gov
           Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
            cDNA Library Preparation: Ling Hong/Rubin Laboratory
            cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
            DNA Sequencing by: Incyte Genomics, Inc.
            Clone distribution: MGC clone distribution information can be
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                    for average insert size 1.8kb. Library constructed by Ling
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                    California, Berkeley) using ZAP-cDNA synthesis kit
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                    Note: this is a NIH MGC Library."
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             (bases 1 to 894)
REFERENCE
          NIH-MGC http://mgc.nci.nih.gov/.
 AUTHORS
          National Institutes of Health, Mammalian Gene Collection (MGC)
  TITLE
           Unpublished (1999)
  JOURNAL
           Contact: Robert Strausberg, Ph.D.
COMMENT
           Email: cgapbs-r@mail.nih.gov
           Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
           cDNA Library Preparation: Ling Hong/Rubin Laboratory
           cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
           DNA Sequencing by: Incyte Genomics, Inc.
           Clone distribution: MGC clone distribution information can be
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Site_2: EcoRI; cDNA made by oligo-dT priming.
Directionally cloned into EcoRI/XhoI sites using the
following 5' adaptor: GGCACGAG(G). Size-selected >500bp
for average insert size 1.8kb. Library constructed by Ling
Hong in the laboratory of Gerald M. Rubin (University of
California, Berkeley) using ZAP-cDNA synthesis kit
(Stratagene) and Superscript II RT (Life Technologies).
Note: this is a NIH MGC Library."

86.5%; Score 363.4; DB 4; Length 894;

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mRNA sequence.

ACCESSION BF129120

VERSION BF129120.1 GI:10968160

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REFERENCE
 AUTHORS
          NIH-MGC http://mgc.nci.nih.gov/.
          National Institutes of Health, Mammalian Gene Collection (MGC)
 TITLE
          Unpublished (1999)
 JOURNAL
COMMENT
          Contact: Robert Strausberg, Ph.D.
          Email: cgapbs-r@mail.nih.gov
          Tissue Procurement: Louis M. Staudt, M.D., Ph.D.
           cDNA Library Preparation: Ling Hong/Rubin Laboratory
           cDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
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                  Site 2: EcoRI; cDNA made by oligo-dT priming.
                  Directionally cloned into EcoRI/XhoI sites using the
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                  for average insert size 1.8kb. Library constructed by Ling
                  Hong in the laboratory of Gerald M. Rubin (University of
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REFERENCE
             (bases 1 to 510)
 AUTHORS
           Liu, X.-Q., Zhou, Y., Zhang, L.-J., Xu, H., Chen, H.-K., Pan, Z.-G. and
           Zeng, Y.-X.
  TITLE
          Transcriptional Gene Expression Profile of Human Nasopharynx
  JOURNAL
          Unpublished (2003)
COMMENT
           Contact: YiXin Zeng
           Cancer Center
          Sun Yat-sen University
           651 DongFeng Road East, GuangZhou 510060, China
          Tel: 86-1380-9770-743
           Fax: 86-20-8775-4506
          Email: yxzeng@qzsums.edu.cn.
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REFERENCE
 AUTHORS
          Liu, X.-Q., Zhou, Y., Zhang, L.-J., Xu, H., Chen, H.-K., Pan, Z.-G. and
          Zeng, Y.-X.
          Transcriptional Gene Expression Profile of Human Nasopharynx
 TITLE
 JOURNAL
          Unpublished (2003)
COMMENT
          Contact: YiXin Zenq
          Cancer Center
          Sun Yat-sen University
          651 DongFeng Road East, GuangZhou 510060, China
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Fax: 86-20-8775-4506
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ORGANISM Homo sapiens

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 AUTHORS
          National Institutes of Health, Mammalian Gene Collection (MGC)
 TITLE
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 JOURNAL
          Contact: Robert Strausberg, Ph.D.
COMMENT
          Email: cgapbs-r@mail.nih.gov
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